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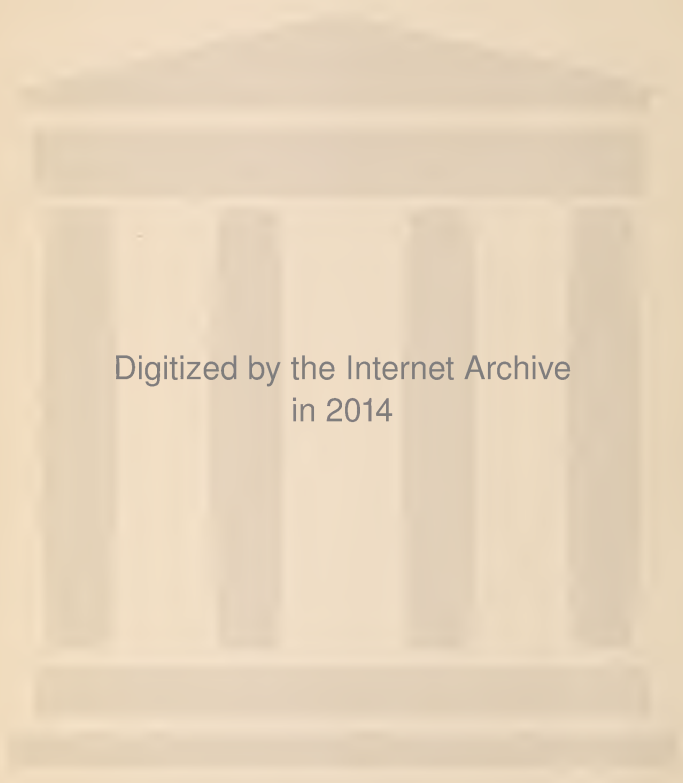
1911

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"Quantam ego quidem video motus morborum fere omnes a motibus in systemate nervorum ita pendent ut morbi fere omnes quodammodo Nervosi dici queant."—CULLEN'S NOSOLOGY: BOOK II P. 181—EDINBURG ED., 1780

THE
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LUMBAR PUNCTURE IN THE PSYCHOSES.*

BY J. ROUBINOVITCH AND H. PAILLARD,

Paris, France.

THE numerous lumbar punctures made by us have revealed certain phenomena of general pathology very little studied as yet relative to the cephalo-rachidian fluid pressure and the results of lumbar puncture on this. Pressure of the cephalo-rachidian fluid has been studied ere the introduction of lumbar puncture by A. Richet (1858), Boche-fontaine¹ (1878), Adamkiewicz² (1883), Axel Key and Retzius (1880), Schulten³ (1884), Falkenstein and Nangu⁴ (1887.) These experiments were made under varying circumstances, most frequently on dogs. The figures obtained vary between 20 and 300 millimeters, ranging most frequently around 100 millimeters and changing from single to triple under the influence of diverse actions, and above all under the influence of respiratory movements.

Quincke⁵ had first examined the pressure of the cephalo-rachidian fluid in man after lumbar puncture. He claims that 150 millimeters is the normal pressure. Kronig⁶ found the pressure to be 125 millimeters when lying down and 410 millimeters when seated.

*Translated from the *Gaz. des Hosp.*, June 28, 1910, by James G. Kiernan, Chicago.

1. C. R. de l'Acad. de Sciences 1878, t.LXXXVI.
2. Sitzb. der Kaiser. Akad. der Wissen. Math. Nat. b.LXXXVIII.
3. Arch. f. Ophthalm. b.XXX.
4. Arch. f. Experim. Path. and Pharm. b.XXII.
5. Berlin. Klin. Woch., Sept. 21, 1891.
6. Berlin. Med. Woch., Nov. 15, 1897.

Secard⁷ has found 200 millimeters pressure in two hysterics. This he regards as about normal. Parisot⁸ concludes from his researches that the figure oscillates from some centimeters to 15 of water in most. The ordinary figure is between 6 and 12 centimeters.

The technique of the experiments personally undertaken is very simple. A glass tube of 2 to 3 centimeters diameter at its inferior extremity is used as a manometer; the vertical portion should be 35 millimeters high and the horizontal should be 3 centimeters. To this last should be adapted a rubber tube 7 to 8 centimeters long. To this should be attached a metal extremity like that of the large syringes of Lauer. This is united with a hollow needle.

The patient's position is very important. It should be lateral decubitus, the head neither too high nor too low in the prolongation of the spine. Puncture is practiced as usual. Pressure should be measured from the outset of the flow. The fluid usually rises slowly in the manometer; usually from 20 to 40 seconds are needed for definite pressure. Once the height is obtained oscillations of the fluid occur rhythmically. In some cases slight elevations from 1 to 2 centimeters occur synchronously with cardiac pulsations. Deep inspiration may determine a fall of some millimeters. Cerebral pulsation may thus be studied. With a little use equilibrium of the fluid is easily determined. Once the level remains immobile the height of the column can readily be measured. Sometimes action of the patient arises momentarily; the tension and some seconds will pass ere it regains its normal state. The patient must then become quiet as possible to avoid the come and go of the fluid and regurgitation into the spinal column. Fifty-five inmates of the Bicetre gave the following results: On five pressure was below 5 c. m., on fifteen pressure varied between 5 and 10 c. m.; on seventeen pressure varied between 10 and 15 c. m.; on six pressure varied between 15 and 20 c. m.; on six pressure varied between 20 and 25 c. m. and on six it was above 25 c. m

7. *La Liquide Cephalorichidian*, 1902.

8. *Congres des Alienists et Neurologists*, Nantes, 1909.

While marked hypertensions have not been observed in acute meningitis, relative are noticeable. The relationship between cephalo-rachidian and arterial pressure varies greatly. Two parietic demented with high arterial pressure 20 and 17 centimeters and a half had cephalo-rachidian pressure, the first of 8 centimeters and the second of twenty-five centimeters. In dementia præcox a patient with 13 centimeters arterial pressure had a cephalo-rachidian pressure of 25 centimeters, another with $12\frac{1}{2}$ centimeters arterial pressure had a cephalo-rachidian pressure of $13\frac{1}{2}$.

Thirty-three parietic demented gave the following results: Less than five c. m. 3, five to ten c. m. 8, ten to fifteen 10, fifteen to twenty 6, twenty to twenty-five 3, more than twenty-five 3.

The variations change with the status of the psychosis as it presents complications or not. Cephalo-rachidian pressure varies with the calm or agitation of the patient with epileptiform or marasmic states. In excitation pressure rises. In one parietic demented the usual pressure was $10\frac{1}{2}$ centimeters. With the onset of an epileptiform state the pressure rose to 23 centimeters. In two others it rose to 35. During marasmic states the pressure falls markedly. All pressure lower than 5 and almost all lower than ten centimeters occurred in the marasmic. Vaschide and Raymond Mennier¹ have raised the question of death prognosis by pressure. They have found that some days precedent to death a markedly brusque lowering of arterial pressure occurs so frequently as to justify prognosis of early death. In three cases of coarse brain dementia from arterio-sclerosis, with softening in men of 43, 45 and 58 years, the respective pressures were 7, 9 and $10\frac{1}{2}$ c. m.

In dementia præcox the pressures display a much more elevated mean than in the precedent cases. Eight cases gave the following results: 1 pressure of 10 centimeters, four pressure of 10 to 15 c. m., 1 pressure of twenty-one c.m., 2 beyond 25 c. m.

In mental weakness with paranoid delusions 1 case had

1. *Gaz. des Hos.*, June 20, 1908.

a pressure of $13\frac{1}{2}$ c. m. and one case had 20 c. m. pressure. In melancholia two cases had a pressure of 27 c. m. while one had $14\frac{1}{2}$, one 17, one 21 centimeters.

One case of psychic epilepsy had a pressure of ten centimeters. Puncture was done between the attacks. A d'Ormen¹ has studied cephalo-rachidian pressure in experimental epilepsy. He operated on slightly morphinized dogs, placing a canula in the occipito-atloid space. During the attacks provoked electrically or by intro-venuous injections of absinthe essence, pressure rose markedly. It remained constant during the tonic phase, oscillated greatly during the clonic phase and then sank considerably.

In imbecility: One case had a pressure of twenty-four c. m. and one case had a pressure of twenty-seven c. m. Arterial pressure in the psychoses has been much studied. Among the more recent researches are those of Marro,² Orchansky,³ Alter-Lenbus,⁴ Gadlewski,⁵ de Block,⁶ Lugioto et Okannessiah,⁷ Bing,⁸ Bravetta⁹ and Eric D. Macnamara,¹⁰ but no results are obtainable as to the effect on arterial pressure of cephalo-rachidian evacuation.

Lafitte, Dupont and Maupetit¹¹ have found that injections of serum into the canine occipito-atloid membrane or an insulation into the medullary arachnoidal spaces raises arterial pressure and that cephalo-rachidian evacuation lowers it. They also found that lumbar puncture lowers the arterial pressure in man. Our researches on this point were made on sixty-four patients, of whom thirty-five were paretic dementes. The patient lying on the left side was allowed to repose in this position an instant, then arterial pressure of the right radial was taken several times with either Potain or Sahlis' sphygmomanometer. Pulse fre-

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1. Arch. Ital. de Biolog., 1902.
 2. R. Acad. Med. d' Torino, March 8, 1907.
 3. Congres des Med. Russ., 1904.
 4. Neurol. u. Psych., 1904.
 5. Prog. Med., June 4, 1905.
 6. Congres de Liege, 1905.
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quency was noted. Puncture was made in the usual way. Generally the cephalo-rachidian pressure was likewise measured. Puncture done arterial pressure was taken as well as pulse. In parietic dementia variable results were obtained. In seven cases arterial pressure was nil or very feeble.

Age	Before		After		C. R. Pressure	Liquid taken
	Pulse	A. Pressure	Pulse	A. Pressure		
34	68	20	68	20	8 c. m.	
*37	60	15	60	15	7	
43	72	17½	70	17¾	25	20 C. C.
*43	108	14	106	14¼	15	2
*43	104	13½	104	14	12	
28	88	12½	88	13	10	15
*63	80	15	76	14½	13	

*Died since lumbar puncture. All of them were of grave types. The *psychoses had been of more than three years duration.*

Lumbar puncture, judging from these cases, seems to have but little effect on the circulation. The meningeal and cardiac relations do not appear to be interdependent. Most patients had blood pressure variations, some slight, some considerable. Pulse frequency and tension rarely vary according to Marey's law that one lowered when the other rises and vice versa. Of the law but a single example occurred and the variation was minimal:

Age 36, before pulse 88, A. P. 18, after pulse 84, A. P. 18½ c. r. pressure 8 c. m.

In three other cases the variations occurred reversed to the law in general, pulse frequency was but little modified, but not so as to respect Marey's law. Pressure was much

more modified than pulse. In the following series of cases tension was markedly lowered without affecting the pulse.

Age	Before		After		C. R. Pressure	Fluid Taken
	Pulse	A. P.	Pulse	A. P.		
*34	60	18	59	15	14½ c. m.	15 c. c.
*57	76	22	74	22		
*40	120	17	120	15	8 c. m.	
*33	72	16	76	14		
33	88	12½	88	11	13 c. m.	
40	68	19½	64	18	19 c. m.	
*31	72	13	70	12	7 c. m.	
41	80	12	80	10½		20 c. c.
44	76	16½	76	12¼	13-17 c. m.	
33	84	14½	80	10	13½	

Here pulse varied little although tension varied between 1 to 4 centimeters; the most important variations accompanied lowered tension:

Age	Before		After		C. R. Pressure	Evacuated
	Pulse	A. P.	Pulse	A. P.		
37	88	16	80	12		
*37	84	16½	78	13½	Feeble	6 c. c.
42	80	14	68	12½	19 c. m.	20 c. c.
33	116	20½	100	19½	14½ c. m.	
41	80	13	72	12½	12½ c. m.	
*37	56	13¼	64	11½	9 c. m.	18 c. c.
*28	92	17½	96	16½	8 c. m.	
*49	80	17	72	15	30 c. m.	
41	112	15¼	120	12	35 c. m.	
51	76	15½	70	14	25 c. m.	
45	84	8	76	7	nil	

Lumbar puncture rarely determines rise of arterial pressure but in the following cases it was slightly marked.

Age	Before		After		C. R. Pressure	Evacuated
	Pulse	A. P.	Pulse	A. P.		
*53	92	14	92	15½		
*43	72	14	72	14¾	5½ c. m.	
38	60	12	72	13		
43	68	12	78	13½	18 c. m.	
43	68	9½	120	10½	32 c. m.	
35	108	9½	56	11	12 c. m.	

Where pressure has varied, whether in fall or rise, modification has not lasted, soon returning to the ordinary. Of thirty-five parietic dements seven presented no modification; one slight variation conforming to Marey's law; two fall of arterial pressure oftenest without pulse change, sometimes with slight relaxation, exceptionally with slight acceleration, six had slight rise of arterial pressure.

Coarse brain disease dementia (arteriosclerosis with softening.)

Age	Before		After		C. R. Pressure	Evacuated
	Pulse	A. P.	Pulse	A. P.		
43	79	14½	60	13½	7 c. m.	8 c. c.
58	108	11	96	7	10 c. m.	
54	68	12½	82	11¾	9 c. m.	

The last patient reacted conformably to Marey's law.

There were eleven cases of dementia præcox.

Age	Before		After		C. R. Pressure	Evacuation
	Pulse	A. P.	Pulse	A. P.		
29	82	13½	82	13	14 c. m.	12 c. c.
21	81	14¼	81	14¾	12 c. m.	14 c. c.
30	84	13	82	12¼	17 c. m.	15 c. c.
27	70	13¾	80	13¾		
30	108	13¼	80	11¾		20 c. c.
29	87	12½	80	11¾	13½ c. m.	5 c. c.
55	76	20½	74	15¼	16 c. m.	12 c. c.
49	80	18½	80	16		5 c. c.
30	72	14½	76	16	30 c. m.	
31	72	10	72	11½	10 c. m.	10 c. c.
30	72	10	70	13½	21 c. m.	20 c. c.

The first three cases presented no appreciable modification; the last three pulse and arterial tension variations.

In four cases of mental weakness with paranoid delusions results were as follows:

Age	Before		After		C. R. Pressure	Evacuation
	Pulse	A. P.	Pulse	A. P.		
24	68	17	56	13½	13½ c. m.	
19	100	12½	88	11½		
34	80	15½	72	14	20 c. m.	
33	68	14	76	11		

Only the last case reacted conformably with Marey's law.

In seven cases of melancholia results were as follows:

Age	Before		After		C. R. Pressure	Evacuated
	Pulse	A. P.	Pulse	A. P.		
26	104	16½	112	15½	17 c. m.	15 c. c.
28	54	13¼	60	12	7 c. m.	10 c. c.
43	64	19½	52	15	9 c. m.	
45	58	14½	64	16		
48	88	14½	84	13		10 c. c.
27	76	14	80	15	14 c. m.	12 c. c.
32	102	14	73	13½		20 c. c.

The two youngest reacted conformably to Marey's law, the next three reacted irregularly, the sixth had secondary syphilis and the seventh tuberculosis.

Periodic insanity in one case resulted as follows, aged 60 before, pulse 96 A. P. 15½; after pulse 84 A. P. 16½, no evacuation. This is conformable to Marey's law. In one case of psychic epilepsy results were as follows: Age 45 before, pulse 84 A. P. 12½, after pulse 80 A. P. 12 C. R. Pressure 10 c. m. with no evacuation; this also conforms to Marey's law. In two imbeciles the results were:

Age	Before		After		C. R. Pressure	Evacuation
	Pulse	A. P.	Pulse	A. P.		
31	64	12½	80	12 c. m.		
40	50	9	52	10 c. m.		5 c. c.

The first conforms to Marey's law, the second does not.

The first impression from these results is the relative frequency of the fall of arterial pressure occurring after lumbar puncture. Eleven times there was a fall of ½ to ¾ of a centi-

meter; five from 1 to $1\frac{1}{2}$ centimeters; six to 2 centimeters; four to 3; five to 4 and once to 5 centimeters.

More rarely was there rise; five times to $\frac{1}{2}$ to $\frac{3}{4}$ centimeters; 11 to $1\frac{1}{2}$ c. m.; 1 to 3 c. m. In forty-six cases out of sixty-four there was fall, in seventeen rise, and in five no change.

Fall is not equally marked in all psychoses. Variable circulatory factors as well as nerve degenerations effect results.

SOME CAUSES OF THE INCREASE OF FEEBLE-MINDEDNESS.*

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THE etiology of mental defect, long a matter of research among those engaged in its care, has become of late a subject of vital interest to the general public who, brought face to face with assured and startling increase, now begin to investigate cause with the one aim, it is to be hoped, of devising means of prevention.

The first steps toward that end—the separation and massing of numbers—have already been taken; educators and guardians of public safety recognizing as never before the necessity of classes for backward children, of juvenile courts and the reduplication of reformatories and houses of detention.

In the handling of these masses, they turn naturally for information to the institutions for defectives already engaged in this work of separation; and, meeting thus on a common ground, may we not hope to press on, each aiding the other in the one aim of checking an increase which threatens to vitiate the very well-springs of society?

The nineteenth century, so prolific in advance on many lines, will have cause to reckon not the least among its achievements, its care and study of degeneracy in some 200 asylums for the feeble-minded throughout the civilized world, if the ultimate result of such massing be not only protection to the unfortunate, but such a check upon this most subtle

*Read before the Thirty-Sixth Annual Convention of the Association of Directors of the Poor and Charities of Pennsylvania, Williamsport, Pa., October 12th, 1910.

form of race suicide as must tend to a further cultivation of higher racial ideals.

This century of investigation has discovered in the study of many thousands of defectives such malnutritive conditions in one generation as must preclude all hope of its healthful generative qualities and, furthermore, an exaggerated sexuality that cannot fail to transmit either its disease or its defect. Yet in the light of such revelation, not grasped by society at large, the work of procreation by inefficient agents goes on, flooding the world with a defective population of all grades from the absolute, harmless idiot to the keen-witted, irresponsible moral imbecile fore-doomed, if not protected, to a life of vice or crime or either as victims or seducers such sure agents in the reproduction of numbers as to necessitate the multiplication of institutions and asylums as is portrayed to-day.

And even these do but temporarily stem the tide, for hardly do they discharge their inmates when the work begins anew; and just here do we come to the main cause of ill; for this increase that we deplore is undoubtedly due to the non-recognition of a vicious element thus scattered broad-cast, often rendered more dangerous by concealment of defect. It has been repeatedly observed that families in which neuro-pathic members appear are often more prolific than the average.

If, as Ribot says: "Among the various functions which in their united action constitute life two are primary, nutrition, which preserves the individual and generation, which perpetuates the species," then that influence which tends most to hamper the one and to injure or exaggerate the other, is the surest enemy to healthful life, the foe most to be dreaded; and this is an inheritance of mental defect of which the condition of the mother during gestation is largely one and the same. An heredity of disease may be purely physiologic, breaking down the physical powers, but not necessarily the mental; but heredity of imbecility is both physiologic and psychologic; the whole being physical, mental and moral, enters starved upon a maimed existence—idiotic or imbecile. This is no fanciful theory as 1,030 cases out of the 4,050

which I have carefully studied attest to a stern reality.

It has been computed that in the United States the rate of increase within the past decade of the abnormal classes—insane and feeble-minded—is not less than 155 per cent.—and that there is a correspondingly rapid increase in other civilized countries. And this is further endorsed by the reports of the last International Congress of Prisons which claim that a large proportion of the prison population on whom is expended some millions of dollars annually, owe their existence to a defective strain. This is but corroborating reports of over half a century back, verifying fears then expressed.

The Massachusetts Commission, 1848, in its report of 574 idiots, shows over 22 per cent. due to heredity of mental defect, direct or collateral, thus: 49 idiotic persons who have 1 near relative idiotic; 9 who have 2; 6 with 3; 4 with 4; 6 with 5; 3 with 10; 1 with 19; 50 whose parents are either idiotic or insane and 21 who are themselves parents. This is interesting when compared with the Eighth Annual Report of the Massachusetts State Board of Public Charities in 1872, which states that “idiots increase in numbers and the rate of increase is greater than that of the general population.”

The Connecticut Commission in its investigations as far back as 1856 found 51 idiots in 17 families, being an average of 3 to a family and 2 families had each 5 idiots. It further reports two or three towns in which there are families wholly imbecile—both parents and children. “In one instance, where a pauper female idiot lived in one town, the town authorities hired an idiot belonging to another town and not then a pauper, to marry her and the result has been that the town to which the male idiot belongs has for many years had to support the pair and the 3 idiot children.”

Adequate cause is reported for 310 of 531 cases examined; of these, defective mental capacity in one or both parents is noted in 65 of 185 cases; consanguinity in 20 cases; tendencies to consumption, scrofula or eruptive disease 41 of 145; fright or grief to mother during the period of gestation in 53 out of 108 cases; epilepsy in 76; masturbation in 19; feeble condition of parents 33 of 163 cases; insanity, blindness

and mixed neuroses in 70 of 164 cases; and vicious habits of parents—what we would doubtless class as moral imbecility, in which, however, intemperance (76 cases) is included—in 95 out of 235 cases. As will easily be seen a large proportion of these causes may be resolved into an heredity of imbecility.

The argument has been advanced that degeneracy is not produced but only revealed by a higher civilization. But the point not considered is that in the onward march of civilization, its fruits of science and invention have in all ages too often been seized upon by the luxurious voluptuary to minister to and to excite new phases of sexual perversion. A notable example of this was found in a famous murder trial, that but recently held the attention of the entire civilized world.

True we may not arrest the current of good in the stream of time, but we may stamp out and cut off with relentless hand its perverted use which threatens worse than the arrest we refrain from, through the pollution of the very life-blood of the race; and this will be achieved only when sterilization of the unfit is made the natural sequence of separation and segregation.

Causes of deficiency have been broadly considered in three groups—influences before, after and at the time of birth, and these may be yet further condensed into hereditary and accidental with a large preponderance toward the former.

This may be noted first in direct transmission—inevitable in cases of defect although sometimes skipping a generation. In a study of some 4050 cases I find it a predominating cause. This may be due in some measure to the factor of environment, the all-pervading influences of our highly nervous American life as contrasted with the quieter life habits of Great Britain and Scandanavia, in whose categories of cause, the influence of tuberculosis and of alcoholism come first.

No country of Europe has shown such a record as that presented by the study of the Tribe of Ishmael where the issue of one diseased man and a half-breed woman is traced

through 48 years, giving no less than 5000 degenerates. Nor do we find such a history as that of the Juke family where 1200 persons, the descendants of 5 degenerate sisters, repeat in successive generations disease and defect in their worst forms—insanity, idiocy and certain reversion to original types.

Habitual drunkenness in parents is an undoubted factor where it has produced a hardening of tissue or change in nervous condition, but it may on the other hand be over-estimated as an absolutely direct cause; the nervous condition it occasions in the woman during parturition or even at the time of copulation must also be considered. My cases show but 4.46 per cent and almost always in combination with some neuroses. Yet in England, Shuttleworth and Beach give nearly three times that, 16.38.

There is a consensus among all peoples, that the condition of mothers during gestation must be guarded most carefully, lest the result be disastrous. Thus the Caprian women, even the poorest peasants, strive to surround themselves with beautiful things—whatever may be within reach—be it only lovely flowers—with the result of an offspring unrivalled for strength and beauty. In France where the residents of the Commune of Batz on the Loire Inferieure acknowledge and bow to the laws of rational living, mental defect is absolutely unknown, and the number of children born is above the ordinary.

Tuberculosis in parents has its influence in many cases, as do cancer and syphilis in somewhat lessening degree.

Of causes acting at time of birth are found the various influences retarding or complicating delivery. The abnormal condition of the mother, injuries to the head resulting from instrumental delivery and asphyxia, are found prominent in both English and American studies, not grading so high, however, as the influences before and after birth.

The third division, viz.: causes acting after birth presenting development of defect the result of either accident or disease, shows first traumatism—injuries to the head from blows or falls—and next infantile convulsions which in the majority of cases prove to be true epilepsy. Of the acute

diseases precipitating defect, scarlatina, meningitis and measles are the chief; these often followed by inflammation of the ear with extension to the membranes of the brain.

The true effect of acute disease is often traced to the lessening of the power of resistance through which the individual succumbs naturally to a neurotic heredity or environment heretofore combatted; general malnutrition apparently causing cerebral atrophy. This is also noted in what is known as idiocy by deprivation, in which the lack or loss of any one sense avenue will preclude or arrest the development more directly dependent upon that one avenue, and the mind suffers a certain starvation, so to speak, as in the case of the blind or the deaf-mute—mutism being an acknowledged example. True it is that other senses may be so aroused as to counterbalance or supply the loss of the one, but when there is lack of nerve force from weakness engendered by causes either congenital or accidental, this fails and idiocy by deprivation ensues.

Here again comes the necessity, as great as that already noted for the mothers during parturition, of favorable environment for the child; an environment that persistently allures and entices may in time awaken dulled senses that must otherwise sink into apathy and utter idiocy.

Summing up the main causes of evil we find heredity the prime factor and therefore the first to be met in the fight against rapid increase. If race culture is to be held superior to the selfish gratification of the individual, too often mere emotionalism, the offshoot of ignorant fantasy or, worse still, of exaggerated sexual impulse—as exemplified in the boy and girl marriages of the day—there can be no doubt that marriage laws need to be so amended that applicants for license should show a clean bill of health, or else affidavit of physician as to inability to transmit, constituting so to speak, a racial guarantee. But one may say the inevitable result of marriage made difficult is, as shown in other countries, its non-observance. Then why not place such illicit cohabitation in the penal code to receive its just punishment as offence against the public weal? Such provision would fight the battle on normal grounds and should appeal to

the patriotism and intelligence of every responsible citizen. But there is yet another field to be covered where irresponsible degenerates congregate or lie in ambush either as the victim or the destroyer, and I contend that from this class, to whom comprehension of the higher calling of parenthood is forever sealed, should be taken the power of procreation. This may be accomplished only through segregation and permanent separation—where asexualization shall accomplish its work of mercy in committing to a perpetual childhood, the abnormally childish individual rendered powerless to transmit his sad heritage of ill.

There is so much prejudice and misunderstanding on the part of the general public that perhaps it might be well for me to go somewhat into detail and explain more specifically the character of the operation itself.

It is not always essential that both testicles and ovaries be removed, but I prefer it as absolute removal is a certainty beyond a peradventure, and when castration and oophorectomy are performed in the young, desire almost always ceases entirely or is at least held in abeyance. The operation is not in the least serious. The usual cleansing before—a few whiffs of ether—and the operation is over. There is a slight drop in temperature followed by little or no fever, and after a couple of days quiet in bed, the parts well bathed and kept antiseptically dressed, the patient is as well as ever.

If for sentimental reasons the removal of the testes and ovaries will not be considered, vasectomy—simply the excising of a section of the vas deferens in the male—and falloc-tomy—the cutting of the fallopian tubes per vaginam in the female, are feasible and so absolutely harmless that in the male, the operation may be accomplished under cocaine anesthesia. After vasectomy and falloc-tomy, the sexual organs do not wither or atrophy, and there remains sexual desire and sexual power, but no power to impregnate.

Under either operation the individual otherwise un-harmed, may likely live out his full period and, with animal instincts so subdued as to be no longer a menace to himself or society, may realize and enjoy life as never before.

On a former occasion I have gone so fully into the etiol-

ogy of idiocy and imbecility that herein I venture to digress somewhat from the title of the paper as requested, and have touched, after a brief resume of the most salient points, upon the subject most intimately associated with etiology, viz.: Prevention, and with no wish to trench upon the perient I have endeavored to present Prevention so clearly, that he who runs may read; comprehending also that I do not advocate the indiscriminate use of the knife, save for certain classes, and these only after due consideration and consultation.

PSYCHOTHERAPY FROM A PHYSIOLOGICAL STAND- POINT.*

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"The thoughts we are thinking, our fathers would think;
From the death we are shrinking, our fathers would shrink;

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They died—ay! they died. We things that are now,
That walk on the turf that lies over their brow,
And make in their dwellings a transient abode,
Meet the things that they met on their pilgrimage road."

From Mortality—Abraham Lincoln's Favorite Poem.

MENTAL healing of disease is not only occupying the serious consideration of the medical profession, to whom it has been known for many centuries, though its therapeutic value had not been systematically studied and practiced, but is, under various titles, receiving the attention of the laity, until there is scarcely a mature mind that has not given some thought to the subject.

Asclepiades, who lived about 100 B. C. was, so far as we can discover, the real founder of psychical methods of cure, although it was in reality the sole, or at least, the principal treatment in that primitive epoch when disease was believed to be due to punishment from God or a visitation of the devil, and treatment was given by the priests, who not only filled the office of physician, but also that of lawyer and philosopher—the "Pooh-Bah" of present-day civilization.

There is a form of psychotherapy as well as psychonosogomy—"Voo-dooism"—still prevalent among the more ignorant and superstitious of our own country, especially among the negroes of the South.

*Read before the St. Louis Medical Society, Oct. 1st, 1910.

This appears the most rational form of mental healing, since it is not vaunted as a cure-all, but is used to break the "charm" or "spell" believed by the highly superstitious one to have been cast upon him by another.

Asclepiades, who conceived the idea that the doctor's province was to cure quickly, safely and pleasantly, "made use of love, wine, music, employment and special means to attract the attention and exercise the memory."

The gullibility of the human race is proverbial, so that the credulity of the laity on matters medical should not excite surprise, but we need marvel at some of our medical confreres who have not only blindly swallowed the bait, but the hook and sinker, of some of the extremists in psycho-therapeutics, who have magnified a remedy into a veritable panacea.

Popularly, mental healing has been the Phoenix of medicine, immortal, but not immutable, the most protean of the innumerable "catch as catch can" practices of the charlatans.

It may be truly said that "age cannot wither her; nor custom stale her infinite variety."

The therapeutic application of mental healing has been so broad that practically every recognized disease or condition has been considered amenable to its treatment, although the medical profession limits its range of usefulness.

Dubois limits psychic treatment to the psycho-neuroses, "those affections in which the psychic influence predominates: they are; neurasthenia, hysteria, hysterical neurasthenia, the lighter forms of hypochondria and melancholia, and certain conditions of very serious disequilibrium bordering on insanity."

By the psychic treatment of disease is meant the correction of perverted action or diseased conditions and the relief of symptoms through purely mental influences, though some systems include physical agencies.

The methods used to impress the subject's mind that it may be in a receptive attitude, are various, but perhaps only three are recognized by the medical profession. They are: (1), suggestion made upon the subconscious mind while the patient is in a hypnotic sleep; (2), suggestion upon the con-

scious mind during the waking state, and (3), persuasion.

In suggestion, whether in the waking state or under hypnotic sleep, the subject accepts the bare-faced commands of the agent, who assures him that he is cured or will be cured through his own mental exertion; whereas, in persuasion (educational method) the subject is made acquainted with his condition, and tactfully shown the reciprocal action between mind and matter and how his mental attitude may so strengthen his will as to overcome his ailment, the skeptical and unbeliever being kept under observation that he may receive reassurance and encouragement as his condition may require.

Suggestion and persuasion have been cleverly and tersely differentiated by Bechterew, in his dictum: "suggestion enters into the understanding by the back stairs, while logical persuasion knocks at the front door."

Mental healing, whether it be admitted or not, is based upon the erroneous theorem, that the mind (more specifically, the "will") is not only omnipotent in its action upon the body, but that it is separate and distinct from matter, *i. e.*, brain, of which it is in reality a product.

The advocates of mental healing do, and must, deny the now well known fundamental and demonstrative fact, that "the brain is the organ of the mind and that mental operations are possible only in and through the brain,"¹ and must also deny that that imponderable force, electricity, has no physical origin.

Upon what other theory would it be possible to conceive how the mind (more specifically the "will"), could upon all occasions and under all conditions, govern every thought, word and deed, as well as the activity of each and every organ?

We apparently fail to recognize that the body is a physical organism and must obey the laws thereof, so that it will in time wear out, but before this stage, it becomes tired and weak and less responsive to stimuli, though primarily there is an increased excitability, to recuperate from which, rest is necessary. One of the fundamental laws of physiology is

1. David Ferrier, *Functions of the Brain.*

that "rest must follow exercise," and this is the scientific basis of both medical and surgical treatment, and roughly stated, recovery by other means is due solely to the *vis medicatrix naturae* and in spite of the treatment.

When mind indefinitely governs matter, there can be no death, hence immortality results and the Biblical decree to man that "thou shalt surely die," becomes null and void.

Mind, like electricity, is an imponderable force, the product of physical agencies which are consumed in the process. In both instances, the elements must be replenished. No one with a knowledge of electricity would dare say it was the primary force which supplied activity to the battery or ran the generator, nor that it could run indefinitely the source of its own supply.

The brain, the centre of animal dynamics, is a storage battery of physical and mental energy which must be continually renewed through good and sufficient sleep, proper digestion and assimilation, competent circulation and adequate excretion.

It is not only fallacious, but to the practical physiologist, preposterous, that mind exists in the absence of brain, since most of the elements of the mind have been localized in the brain, destruction of the center for a given function being followed by its loss.

In thus maintaining that mind is but a function of brain, we are aware that we subject ourselves to the anathema of "materialism," which is, in the words of Sir Frederick Bateman, "a term used as a kind of psychological scarecrow to frighten all those who are endeavoring to trace the connection between matter and mind. Surely there is nothing contrary to sound theology in assigning certain attributes of functions of an intellectual order to certain parts of our nervous centre; the cerebral localization of our divers faculties and the plurality of our cerebral organs, strikes no blow at the great principle of the moral unity of man. The same power that caused the earth, like a spark from the incandescent mass of unformed matter, hammered from the anvil of Omnipotence, to be smitten off into space, this same power surely could just as well ordain that a multiplicity of organs

should be necessary to the full development of man's mental faculties, as that the manifestation of them should depend on the integrity of one single organ."

The corollary to the theorem that the mind is not the product of physical agents, is that the body is inexhaustible, hence can be made to act indefinitely by force of the mind, which is absurd.

The logical conclusion of these false premises is that disease has no physical foundation, which is demonstrably false.

If the mind is not dependent upon the brain, but only acts through that organ, as contended by some, continuous action will in time exhaust the brain which must obey the physiological law that "rest must follow exercise."

In either case, physiological rest of the overwrought neurons is indicated and necessary, and not continued activity by convincing the patient there is nothing the matter or that he is cured, or will be cured, through his own mental efforts.

As evidence that mind is either the result of the action of brain or that physical agents act directly upon the mind, is the delirium from toxines, the effects of alcohol and the action of certain drugs which may even produce insanity, etc. In either event, we certainly demonstrate mental activity through physical action, or that matter may actually govern mind.

"Every psychical process has its correlative in a physical process," which may be demonstrated by means of the plethysmograph which shows an increased amount of blood in the brain during mental activity as well as by the ergograph which shows that mental activity is accompanied by the expenditure of energy.

These phenomena prove the mind and body to be functionally reciprocal.

Dubois, the great expounder of the theory of persuasion, in his elaborate work on the Psychic Treatment of Nervous Disorders, describes the reciprocal action of mind and body when he writes of hysteria, as follows: "It seems as tho the auto suggestions were provoked by strange sensations arising out of the departments of the organism by a special pathological coenesthesia."

Again he writes, "It is therefore logical to admit that one could not have any psychic manifestations without concomitant cerebation; without physio-chemical modifications of the brain cells; without organic combustion. One might say, by slightly changing the terms of a celebrated aphorism, that 'there is nothing in the mind which is not in the brain!' " He acknowledges "that the expression 'disease without physical foundation' has no reason for existence."

He further writes, "I admit then, without being able to detect the mechanism of the transformation, that what we call 'thought' is only the product of cerebral activity. I conclude that no disturbance of this thought can exist without some pathological change either slight or lasting, in the brain substance," yet he ventures the assertion, "Nervousness is a disease pre-eminently psychic and a psychic disease needs psychic treatment."

Notwithstanding this positive statement, further on we read: "Does this mean that all nervous conditions are only brought about by psychic means, and that all may be cured by the treatment of psychotherapy? Alas, no! There are many nervous patients who submit so easily to the influence of advice that one would say that they are only afflicted by a disease of the mind. There are others in whom one recognizes somatic and psychical influences; and lastly, there are psychoneurotics who have in the very organization of their brain certain diseased conditions which render the patient absolutely refractory to all psychotherapeutic action.

In his recent work² we read, "Neurasthenia is a chronic accumulated fatigue This is so true that the neurasthenic state can be provoked, so to speak, experimentally by fatigue in subjects otherwise normal."

From this we are to conclude that a disease of the brain brought about by prolonged enforced activity of that organ through mental influence, may be cured by the same means. In like manner, any disease or injury brought about by exposure from mental fool-hardiness, should be cured by the

2. Nervous States.

exercise of the same "indomitable will" which acted as the primary cause.

If little Willie's wilfulness leads him to play with the forbidden "family hatchet" with which he gets cut, will his life or limb be saved, the blood stanching, wound healed and all danger of future trouble (*i. e.* infection, lockjaw) be averted, if he be persuaded to yield up the offending weapon? Or will it be necessary to treat the weapon, as in the days of the "Weapon Ointment,"³ or wash the blood-stained garment with the "Sympathetic Powder"³ of the seventeenth century? Or should we use direct suggestion by kissing the wound (thus adding to the danger of infection) and assurances of cure?

The question naturally arises, in general, should the treatment be directed to the cause, to the effect or to the patient, which frequently includes attention to both cause and effect, and usually more?

In the first place, we do not believe there are any psychic causes properly considered of disease; unrestrainable emotions, instead of being the cause of brain disease, are the results of previous neuron weakness, which results in loss of volitional control, or disequilibrium between action and restraint, permitting the emotions to run riot. This is corroborated by the following from Dubois, "It is in hysteria that one sees the infinitesimal traumatisms which would have no consequences for the healthy man, or even for the neurasthenic, lead up to paralysis, contractures, or various painful states which will last for years."

Can there be anything clearer than that the symptoms were but the outgrowth of the pre-existing diseased nervous system, since they would not have developed in a healthy man, or even a neurasthenic?

Hysteria is, as defined by Mobius, "a *state* in which ideas control the body and produce morbid changes in its functions," so that symptoms may be caused both to appear and disappear through mental stimuli.

Diseases resulting from intellectual abuse (over-work

3. O. W. Holmes, *Currents and Counter Currents.*

or voluntary stress) are no more to be considered "mental causes" than bodily dissipation or physical over-work. Drs. G. L. Walton and W. E. Paul⁴ support this contention in the following words: "Careful and intimate study of the mental characteristics of so-called neurasthenics will generally disclose a constitutional tendency to morbid sensations, exaggerated fear regarding internal and external dangers, undue anxiety about trifles, over-conscientiousness in deciding on courses of action, undue insistence on the nonessentials of life, intolerance of various sights, sounds and odors, with general incapacity for adjustment to surroundings. Such individuals are already more or less mentally exhausted before even commencing on the over-work to which they are prone, and to which is popularly attributed the break-down. In such cases, while immediate mental or physical effort may be the exciting cause, *or rather the occasion*, of the collapse, the underlying constitutional tendency, increased in many cases by toxic influence, is the essential cause. In other words, so-called neurasthenics, psychasthenics or phrenasthenics *carry their stress with them.*"

Mental stress primarily affects the higher regulating centers, which, if sufficiently prolonged, will result in weakened volitional control from which a vicious circle is easily established.

Dubois says, "When in the conditions which we still describe as normal, our ability to work decreases, when emotions become more sensitive, when we are conscious of a feeling of sadness, whether or not it be justified by events, it is because some sort of change has taken place in our neurons. We are at such a time already in an ailing condition, if we compare it with the ideal state of health and with the well-being of an organism that works harmoniously in all its parts."

Again he writes, "The real causes of psychoneuroses are not in the accidental happenings that have provoked acute symptoms, such as traumatism, illness, functional disorder, emotion and fatigue, these provocative agents act upon us every day, but they lead to no permanent trouble in our

4. Massachusetts General Hospital Report, Vol. II., No. 1.

health because we resist them with a more or less voluntary indifference. The nervous patient, on the other hand, reacts by virtue of his abnormal mentality."

In his more recent work,⁵ Dubois himself asserts that these psycho-neuroses are hereditary, due to "a primitive weakness, an asthenia," even going so far as to say that many of these cases which have been temporarily cured, later develop mental confusion of the melancholic. As direct exciting causes, he mentions "physical work, intellectual work, abuse of pleasure and the emotions." He attributes these conditions to mental defects, such as "pusillanimity, emotivity, aboulia, indecision, etc.,—all symptoms which denote a weakness of the mental synthesis, particularly in the most delicate operations."

True, these symptoms represent the earliest manifestations of failure in the more highly specialized functions of the mind—the outgrowth of an unstable brain, which is the physical basis of mind.

Many observers have noted that mental symptoms may be acquired from physical fatigue.

Tissie writes, "Violent exercise pushed to extreme fatigue in highly trained men, healthy and robust, by bicycle race, walking, or any prolonged and rhythmic muscular work, provokes experimental and transitory psychoses. These psychoses have the same outward manifestations as the pathological psychoses of morbid subjects, hysterical, degenerate, insane, etc."

Binswanger mentions as the possible consequences of mountain climbing, "not only physical depression, but insomnia, sensibility to sound and light, hallucinatory states, restlessness of the limbs, trembling, states of distress, irritability, sadness, tears and jactitation."

Other competent observers, such as Féré, Lagrange and Gilbert Ballet, have described the mental symptoms—obsessions and impulsions—which result from physical overwork and fatigue.

If the nervous patient has an "abnormal mentality,"

either inherited or acquired, and mind is the result of the activity of brain, as Dubois admits, then these nervous patients have an abnormal brain, viz.: it is sensitive to both internal and external influences, unstable and erratic, so that there is a loss of equilibrium between action and restraint.

The brain is composed of a multitude of cells (neurons), having the power of motion and conductibility, each of which is a unit, though physiologically a part of one great complex hierarchy, functionally grouped and so arranged that each plane is responsive, through contact of the cell processes, to stimuli from all other planes, as well as external irritation, and all are normally subservient to, and more or less under the control of, the highest area, viz., the psychical centers, where are located the higher mental faculties from which there results judgment and will.

While this is a description of the normal stable brain, innate or acquired weakness may so disturb this harmonious action of the different component parts, as to cause the loss of proper restraint of the higher centers over the lower.

The general functions of the brain may be classed as sensory (including the appetites and emotions), motor and intellectual (from the latter of which results judgment and will, the latter having the power to inhibit or re-enforce a sensory stimulus or motor-reaction), which in their normal state, are so poised as to form what we call a "well balanced brain," but when disturbed through weakened inhibition or irritability of sensory or motor areas, cause all sorts of unnatural thoughts and acts, and though they may be recognized and appreciated by the afflicted person, are without his power of control.

We must recognize the following now generally accepted basic principles: (1), that every psychic phenomenon is the result of a material process in the cortex of the brain (this is recognized by both meta-physicians and dualists); (2), that there are cerebral processes, as reflex and automatic acts, unaccompanied by mental processes; (3), when movement is accompanied by, and results from, a mental process, it becomes action; (4), action is composed of a stimulus, sensation, idea-association (revival and comparison of mem-

ory pictures of former stimuli, resulting in volition), and movement; (5), feeling of pleasure or pain is not an isolated state, but is combined with sensation and idea as attributes or properties of the nervous system, *i. e.*, emotion is specialized sensation; (6), will is not an independent property of mind, but is the final decision or action resulting from the association of conflicting ideas; (7), suggestion is really a reflex mental act, resulting, as it does, without the intervention of decision between conflicting emotions or idea-associations (thought).

Peripheral sensory stimuli, after passing through the optic thalamus where they are properly condensed and elaborated, are registered, as on the cylinder of a phonograph, in the different regions of the cortex, not alone as sensory impressions, but as painful or pleasurable, emotional or intellectual states; conversely, mental operations, emotional states or irritations of the sensory cerebral zone, may revive the local manifestations which registered them, causing hallucinations, or so-called "imaginary" diseases.

From these it is seen that there are but two elements in mental actions, viz.: sensation and idea (revived percepts); judgment and will being highly specialized products resulting from the cultivation of these two elementary properties of cerebral activity, as is shown in the mental (*i. e.* brain) development of the child and is evidenced in the decadence of the aged.

Herbert Spencer wrote: "We speak of will as something apart from the feeling or feelings which for the moment prevail over others; whereas it is nothing but the general name given to the special feeling that gains supremacy and determines action. Take away all sensations and emotions, and there remains no will. Excite some of these, and will, becoming possible, becomes actual only when one of them, or a group of them, gains predominance. Until there is a motive (mark the word) there is no will."

In brief, will is an epiphenomenon of brain, and does not primarily control cerebral activity, but serves to regulate (*i. e.*, modify and control) the flow of the ideas, which are but registrations of external impressions, elaborated by

mentalization and which follow one another according to the laws of association, habit, contiguity and similarity, without the intervention of any especial voluntary power of mind, when they are not the product of environment. From which, it may readily be seen how easily a vicious cycle can be established in a neuropathic or psychopathic individual in whom, from weakened volition, the flow of ideas are uncontrolled and from defective judgment, erroneous impressions are uncorrected.

Will (reflective volition from choice) is to be distinguished from impulse (unrestrained action from emotion without deliberation) with which it is often confounded.

In other words, the will is to the brain what the governor is to the steam engine, *i. e.*, receives its motive force from the very power it is designed to regulate.

Since the higher specialized functions, attention, judgment and will, are the first to become weakened, which weakness in the psycho-neuroses, is concomitant with irritability of the lower neuron areas which tends to aggravate the primary condition, the afflicted is in the position of one attempting to "lift himself out of the quicksand by his own boot straps."

In both the psychoses and neuroses the normal stable equilibrium between action and restraint (the "will") is lost, when the motor and ideational response to stimuli, whether external or internal, is either increased through primary irritability of the lower neuron areas (the so-called subconscious mind), or (later) diminished through exhaustion; and since the "will" is but a product of the higher areas of the brain, it, too, may become weakened by overwork and hence unable to control the lower areas.

Whether we consider will in the abstract (existing independently of matter), acting upon the brain, or whether it be considered the outgrowth of ideas, previously registered in the brain, plus environment, we must reckon the physical element, *i. e.*, the brain, as demonstrated by the aphasias, the organic insanities, etc., and especially evident in the affective and motor (insanity of acts) forms of insanity in which an otherwise proper individual may say spiteful things, use obscene language or perform disgusting acts.

contrary to his wish and in opposition to his attempt at control.

If the will be independent of brain and omnipotent in its control over the body or even capable of controlling a neurasthenic or hysterical brain, one should certainly be able to control his emotions and desires and such functional derangements as idiopathic epilepsy, chorea, occupation neuroses and exaggeration of the normal reflexes.

Exercise in health, short of fatigue, strengthens; but if the system or an individual organ be weakened by disease, or if exercise be carried beyond the point of fatigue, the expenditure of energy (catabolism) exceeds the income (anabolism), the result of which is further debility and consequent weakness of its physiological activity, which can be no stronger than the organ from which it receives its power.

In all so-called mental diseases there is either directly or indirectly an involvement of the brain, which is the source of the will, which in turn, under normal conditions, is the regulator, but never the motive force, of the brain.

Hence the fallacy of mental healing, in which the mind, which is the product of matter, *i. e.*, brain, is expected to govern indefinitely a "run-a-way" brain, from which the mind obtains its power, without finally exhausting itself and of course, the brain upon which its existence depends.

To be brief and use a homely simile, if one must "keep the brake on" to control the bodily actions, the brake will itself finally wear out, thereafter permitting the organism to run riot.

Although Dubois would lead us to believe his results are due solely to psychic treatment, he does not ignore physical means; in fact, he finds it necessary to forestall criticism, and attempts to reconcile his expressed faith in psychotherapy with the use of rest in bed and the liberal use of milk, eggs, etc., in the following language: "The majority of the results which I have quoted have been obtained under the favorable conditions of rest-cure and massage. I have taken care to remark distinctly that I only look upon these means as auxiliary and that I attribute the cure to moral treatment."

Continuing, he writes: "But I foresee an objection.

Some one might say to me, 'Yes the results are striking; but you have employed various means at the same time and nothing can prove that you must rank your psychic influence as of the first importance. You hold physical measures too cheaply and you forget that others obtain analogous results by physical and medical agents without ever dreaming of adding psychotherapeutic procedures.'

In reply to this objection, he writes: "On the other hand, I have seen so many patients cured by the means which I have set forth whose nervousness has resisted the usual treatment, that I am forced to recognize the power of psychic treatment. It is quite possible in Weir Mitchell's treatment, to bring into play both physical and moral agencies. Rest, diet and massage can only act slowly and progressively; one must wait for the cure. But when from the beginning of the treatment or during its course, a sudden improvement takes place following a conversation when the patient recognizes himself that he has simply yielded to good sense, it is impossible to deny this moral action."

If this "sudden improvement" of which he writes, is permanent and not temporary stimulation through the emotions, which is so characteristic of the psycho-neuroses, we would say the patient's good sense had yielded primarily to the upbuilding of the brain from the effects of the milk, eggs, rest, massage and sleep; the psychic treatment only restoring the remaining inertia.

The fact that a patient recognizes a sudden change in his condition is not conclusive that it resulted from psychotherapy, since it not infrequently happens that a neurasthenic patient under treatment for several weeks without acknowledging any change in his condition will experience a decided improvement when there has been no alteration in the treatment or without "suggestion" and may even inquire why the "last medicine had not been prescribed first."

• Since neurasthenia is essentially a chronic fatigue neurosis (primarily an irritable weakness of the cerebral neurons from which there results further fatigue, with its consequent weakened volitional control, impaired digestion, enfeebled circulation and defective excretion), presenting

a complex etiology and pathology, it is impossible for it either to be caused from, or cured by, a single emotional stimulus,⁶ and since a weakened will cannot enforce sustained and consistent effort, it is apparent that a neurasthenic brain is not in condition to ignore its multitudinous symptoms sufficiently long to divest itself of its etiological and pathological elements.

The nature of hysteria is such that the "mental attitude" or symptoms may be changed by suggestion or an emotion without in the least affecting the underlying pathological condition to which the suggestibility is due.

It is recognized that occasionally after a patient's physical condition has been restored, he is in a state of mental inertia; he has lost the power of initiative (as is the case with a limb which for a time has been placed at rest), and since mind does not act, but reacts, a stimulus (sensory or emotional) of sufficient intensity to overcome this inertia is necessary to restore normal mental activity.

In a paper on neurasthenia,⁷ in 1906, the author wrote on this point as follows: "after we have restored our patient's physical condition we are occasionally chagrined to find him, like 'one convinced against his will, of the same opinion still,' viz., he is 'not well' or 'does not feel right.' "

On this point we can do no better than to quote from Dr. Cowles,⁸ who says, "The nervous invalid may remain such even under strongly recuperative tendencies, simply from mental habit, confirming it both by misuse and disuse of the normal power. The patient, powerless to contend alone against the forces of weakness and habit, must have a physician for both mind and body."

The patient's condition is graphically portrayed by the poet in the following humorous verse:

"But yer lookin' *down*," the blackbird said,
 "Look at the blossoms overhead;
 "Look at the lovely summer skies;
 "Look at the bees and the butterflies,
 "Look *up* ole feller. Why, bless yer soul,
 "Yer looking' *down*, in a mus'rat hole!"
 But still with a gurgling sob and choke,
 The blamed ole critter would only croak.

6. Fright in the Etiology of the Neuroses. David S. Booth, the Railway Surgeon, Vol. 13, 1906.

7. Neurasthenia, Traumatic and Idiopathic: Its Pathology and Prognosis. Journal Missouri State Medical Association, Sept., 1907.

8. Neurasthenia and Its Mental Symptoms, The Shattuck Lecture, 1891.

These are the cases which above all others, require the highest degrees of judgment, tact, skill and resourcefulness to fully restore to a healthy mental tone, and I might also add, these are the cases which have by rest for days, months or years, been restored physically and are instantly restored to activity by a strong emotional stimulus, such as a cry of the house on fire, various "mind cures," etc., and are the cases which constitute the "miraculous cures" of the charlatan.

"The results obtained are due solely to the revival into activity of the overly tired cells which recuperate by virtue of the temporary suspension of activity, but which may be called into action before recuperation is complete, so that what may at first appear to be 'a brilliant triumph' and vaunted by the secular, if not the religious press, as a 'miracle,' may later prove an 'ignoble defeat' by the patient lapsing into his former state or developing new phases of his disease.

"While recovery from the neuroses is gradual and only proportionate to the restoration of the weakened nerve cells, individual symptoms may cease suddenly, either spontaneously or from emotion, from the latter of which, however, instant deaths have been reported by such authentic writers as Gowers and Weir Mitchell.

"Stimulation through the emotions, like that from alcohol and coffee, to which people frequently resort to good brain-fag, is at best but a spur to the jaded horse and frequently leads to exhaustion from forced activity, when rest and nourishment of the fatigued and irritable neurons are indicated, and these can be certainly safely and permanently accomplished only on scientific medical lines."⁹

The fact that persons have recovered from disease through the *vis medicatrix naturae* alone, or aided by such more or less valuable (?) adjuncts as "faith," a "buckeye," or a "rabbit's foot," etc., is not sufficient cause for formulating a universal plan of treatment, particularly since there is, perhaps, no curable disease from which some one, at some

9. Has Medication a Place in the Therapy of Nervous Diseases? By David S Booth, St. Louis Clinique, June, 1903.

time, has not recovered without any sort of treatment or attention.

The relief of symptoms of the psychoneuroses does not constitute a cure of the underlying physical cause, to which is due the emotionalism which give them birth and which makes relief possible by suggestion or hypnotism excluding them from the field of consciousness through the induction of a "negative hallucination."

As evidence that suggestion can but relieve symptoms, unless the physical condition has previously been restored, we report the following illustrative cases which will also demonstrate that we do not despise the psychical element in treating nervous diseases, on the contrary the author has for many years used persuasion, or the educational method, in dealing with the neuroses and psycho-neuroses, though only as an adjunct to physical means.

Case 1—Maiden woman, aged 32, some three months before consulting me had been frightened by the attempted burglary of her home in which she and her mother were alone; during the night she was seized with scoliosis (the body being flexed to left) with which she was still affected when she called upon me in spring of 1906, but after the application of a mild current of galvanic electricity through the brain for its psychic effect, she was instantly relieved upon the assurance that she could straighten up. Patient always delicate and, owing to her nervous condition, had been unable to follow her occupation of teacher for three years prior to the development of this symptom. Placed her on medical treatment from which she improved, though had frequent temporary returns of the scoliosis, which always responded to suggestion, for some weeks after beginning treatment. Made complete recovery, weighs more than ever before in her life and is perfectly strong and well.

Case 2—Married woman, aged 30, no children, consulted me three months ago with history of left hemiplegia of eight years' duration. Left hand in flexion contracture, left foot in position of Talipes varus; wore a splint on leg to prevent contracture of leg on thigh; left knee greatly swollen and tender. While a mild galvanic current of electricity was

being applied, at word of command, patient would completely straighten hand, fingers and foot, though could not do so prior to her visit and even thereafter was not able to do so well without electricity. Upon the assurance that the leg would not draw up she walked home carrying her splint and the leg has given no trouble since. The tenderness of knee disappeared at once and the swelling after two or three treatments, but the hand and foot, after the decided immediate improvement only slowly returned to usefulness, the foot making the most rapid improvement, until she had regained good, though not perfect, use of the limbs, discontinuing treatment before complete recovery.

Patient was placed on medical treatment to tranquilize the brain and reconstruct the weakened neurons. However, after the disappearance of the hysterical manifestations, Babinski's reflex and ankle clonus became manifest, which either indicate an underlying organic basis (a possibility negatived by the history, since it began with right hemiplegia, changing in a few hours to left side), or there is presented a symptomatology which is very unusual and by some considered impossible in hysteria. The sudden functional improvement in this case is accounted for by the previous restoration through rest of the weakened neurons, which were called into activity by mental stimuli.

These cases demonstrate that permanent improvement is only proportionate to the reconstruction of the weakened nerve cells.

The following cases illustrate that the neuroses can be restored in the absence of faith which itself returns with restoration of the underlying physical conditions:—

Case 3.—Maiden woman about 47, consulted me ten years ago regarding insomnia, "dyspepsia," headache, etc., and wanted to know if it were possible for her to be cured, since she had no confidence in either doctors or medicine and had come to me because I was the only doctor she had met in the city. Said she had been reared in a doctor's family, and was early imbued with the belief that one could get no relief from treatment in which he did not have confidence. I expressed the opinion that if she followed

instructions, she could be restored. After a few weeks of treatment, I lost sight of her for some five years, when she called to inform me that she had been thoroughly well since, and to tell me that she had been convinced of the efficiency of medicines.

Case 4.—Widow, aged 37, devout Christian, consecrated to church and missionary work, so active and enthusiastic that she might be referred to as a fanatic, consulted me Feb., 1907, for insomnia, indigestion, dizziness, etc., and pain over dorsal region of spine—all of several years standing. Had been treated by an osteopathic physician, in which she still had great confidence and respect.

The osteopath made a diagnosis of dislocation of the fourth dorsal vertebra which he was able to reduce (?) each treatment, but which slipped back (?) between visits, hence she could not expect permanent benefit therefrom. Had tried the Christian Science "route" to health without benefit, so that she consulted me with little, if any, hope, as she had about lost faith in God and man. She could not understand how medicine could reduce the dislocated vertebra, which she confidently believed she had after the failure of osteopathy and, especially, Christian Science, in the light of her own ordinarily strong faith in the power of religion. A few weeks of purely medical treatment resulted in the permanent relief of the pain over the spine, and a few months of treatment resulted in fully restoring her physically and mentally.

Case 5.—Maiden woman, aged 44, whose life was given entirely to Christian missionary work, visiting hospitals, prisons, etc., and though not a member of any sect, believed in the efficiency of prayer to supply every need, depending upon it even for her own meagre subsistence. Consulted me in 1905 for classical symptoms of nervous breakdown. After but three or four weeks of treatment, accompanied with confinement to bed and prolonged induced sleep, she informed me she did not need further treatment, as she was perfectly well since she had regained her "faith." Have twice since treated her for similar conditions with the same history. Of course, in neither instance had she been fully restored, though feeling well, etc.

Certainly the psychical element in these cases was slight, if any. Time will not permit reciting the histories of a few cases illustrative of the inertia occasionally remaining after recovery from the physical basis of the psycho-neuroses, showing the difficulties encountered and the resourcefulness necessary to overcome it.

The success of psychic treatment depends upon the "mental attitude" of the patient, *i. e.* if one believes himself cured or that he will be cured, recovery results; if he never believes himself ill, there is no disease, yet we see nervous people with an exaggerated feeling of contentment—"Euphoria," who cannot be made to believe themselves ill, yet grow progressively worse until they collapse or end in insanity.

The old darkey who said he "had noticed he never felt well when he was sick" was no mean philosopher, but evidently he did not include Euphoria (or Hedonia), with which he may have been afflicted when he reported the result of his observations.

A number of years ago we were consulted by a man and wife, each of which recognized the other was nervous and should have professional medical care, yet neither would admit being nervous or take treatment. A few years thereafter, one of them committed suicide.

Another case, a year after the author had incidentally recognized a neurasthenic condition, developed a delusion of persecution while on a train and jumped from a car window, recovering sufficiently after treatment (purely "physical," since he was "out of his mind") to return to his employment, when I lost sight of him. Other cases under our observation have had nervous prostration from one to seven years after diagnosis was made, but not concurred in by the patient.

Symptoms are the guide-posts of diseased conditions, just as the nerves are the sentinels and red lights of the body in health, so that nothing is accomplished by ignoring either.

Even the sensation of hunger may be ignored until it passes away, when one may live economically in blissful ignorance until he starves—a euthenasia said to precede death from other causes, especially drowning and freezing.

The difficulty in attempting to demonstrate to a layman

that the symptoms are in abeyance and that a cure has not supervened, is due to the fact that the disease may be years in developing, since the rate of progress depends upon the ratio between waste and repair of the nerve cells; or death may occur in the meanwhile from some acute or intercurrent disease to which the neuropathic is especially liable, and the subject die "cured."

That one may become so "over tired" as to lose the sensation of normal tire ("anæsthesia to fatigue") is a recognized fact and a frequent observation, as well as a most dangerous condition, since, untreated, exhaustion is the final outcome.

We occasionally see the collapse of the strenuous business man of large affairs after gaining a competence in this world's goods and retiring from active business, interest in which has stimulated his already over-wrought and irritable nervous system and, through the disequilibrium of the brain centers, caused constant daily over-draughts on his nerve capital until he becomes a nerve bankrupt.

The nervously afflicted usually feel best when engaged in their daily routine occupation, becoming irritable and cross when they relax after their day's labor.

Over-tire is due not alone to actual weakening of the cells, but to an accumulation of waste products (autochonus intoxication from the accumulation of cholin and neurin, etc.—literally the accumulation of ashes from combustion), which, when cell activity is continued beyond the ordinary stage of fatigue, act as an irritant upon the already over-worked cells, still further stimulating them to action until the sensibility becomes blunted, when action may be continued without the feeling of fatigue (a condition popularly spoken of as "second wind"), when organic disease may supervene or even collapse result, as is often manifested in the athlete and Marathon sprinter.

Doubtless it is this intoxication which makes it possible for the afflicted to ignore the symptoms which are the signals of impending calamity, and facilitates the hypnotic condition which creates a "negative hallucination," which is so deceptive and withal so dangerous.

To the mental healer these instances of ignoring the warnings of nature demonstrate the "wonderful power of mind over matter", though to the rational scientific mind they demonstrate that man can be as intelligent (?) as the proverbial ostrich, which, burying its insignificant head in the desert sand, magnanimously offers up his enormous body as a living sacrifice to the pursuing foe.

Metropolitan Building.

THE INSANITY AND INEBRIETY OF J. WILKES BOOTH.

BY T. D. CROTHERS, M. D.,
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AFTER an interval of forty-five years, scientific study of the brain and its diseases, has brought out the fact that the tragic death of President Lincoln was the act of an insane inebriate, and was due to an accidental combination of circumstances and not the result of a matured plan of a criminal.

Insane inebriates in every circle of society frequently conceive and plan tragedies, which are rarely materialized, owing to their unstable thoughts and conduct. The disordered brain lacks persistency and ability to adapt itself to changes and the narcotic action of alcohol, alternately irritating and depressing the senses, bewilders the reason and prevents any continuous thought or conduct.

J. Wilkes Booth was known as an inebriate with delusional impulses which might materialize into unusual acts or crime of almost any character, according to circumstances and opportunities. Anyone who became inimical to his confused brain, might provoke a tragedy, but it would be simply a question of favoring causes and conditions.

Like a Bedouin he was without any recognition of duty or responsibility, and entirely at the mercy of his morbid impulses which would vary any moment from internal and external conditions. His sane appearance was automatism and gave no clue to the loss of control and reason behind. Both prisons and insane hospitals in this country have exact counter-parts of Booth in history, conduct, degrees of irresponsibility and purposeless acts and crimes.

A review of the facts of heredity, life, character and crime of this man reveals and points to a history common and similar to inebriate maniacs in all parts of the country.

BOOTH'S HEREDITY.

Booth's father was an actor of much genius, but erratic, impulsive and subject to moods. He drank more or less, and in the later years of his life he was frequently intoxicated. When sober and in his best days, he was a man of great intensity with alternate exaltations and depressions. At times his acting would be almost marvelous in its realism and reproductions of characters and at other times he was very common-place, abstracted and disappointing to his audience.

Often when acting he would lose consciousness of the situation and forget that he was playing a part and enter into the spirit and letter of the play with an absorbing energy that was to be dreaded, particularly in tragedy, where acts of violence were to be represented.

His associates regarded him as uncertain and dangerous in tragical dramas. He seemed to lose judgment and orientation, as well as power of control and make the character so vivid as to frighten his associates. This was termed eccentricity and temporary mania, particularly after drinking, and on several occasions very serious tragedies were narrowly averted.

This uncertainty extended to his conduct in keeping engagements and his managers were always in conflict with him, because he never could be depended upon.

On one occasion he tried to commit suicide by jumping into the water. As a result he suffered from a broken nose. His wife watched him with great care for many years. Then his son Edwin went about with him to control and regulate his conduct. He was regarded as a monomaniac, and his mind became more, and more unstable, although in lucid intervals he appeared very devoted to his family and friends and reasonable in every way.

Many actors refused to play with him in certain parts because of his uncertainty and liability to make the play real. He was recognized as a genius living on the borderland of

insanity and frequently unconscious and irresponsible for his acts and conduct.

His wife, the mother of J. Wilkes Booth, was a quiet domestic woman who became a neurotic in early life from her incessant devotion and efforts to correct her husband's eccentricities and keep the family together. Probably in the early years wine was used on the table, following the custom of those days. She seems to have inspired the warmest devotion and respect of her children, some of whom died in childhood, and in all probability the eccentricities and peculiarities of her husband made her unstable and nervous and increased the anxieties of her home life.

BOOTH'S EARLY HISTORY.

Born in this atmosphere, Booth seems to have inherited much of his father's impetuous, uneven temperament. He was excitable and enjoyed dramatic situations. Would ride around the country on a horse with a lance or a sword, making imaginary charges at trees, after the manner of the Knight Errants.

He was very quickly exhausted from excitement and over-exertion and would lie down and sleep anywhere; then recover and start in again. His training was by tutors and was irregular and desultory, depending on conditions and surroundings.

It is said that his mother was very closely attached to him because of his exact likeness to his father, in erratic conduct, moodiness and impulsiveness.

He began to drink spirits very early, probably wines, and as he grew older and went out in drinking company the drinking increased. He would have distinct excesses in which he would use alcohol to intoxication and be stupid for a day or two.

As an actor he went on the stage early, performing minor parts, but was unwilling to work up by degrees, hence wanted to take leading parts and refused to play when he could not get the positions he wished. He was spirited, intense, very emotional and sometimes showed great artistic spirit. On other occasions he was dull, commonplace and moody.

As he grew older, his attractive personal appearance

and alert frank manner made him popular with the audience. In the judgment of his contemporaries he was a very graceful, pleasing actor, who loved adulation and played for the gallery, unless he was deeply interested in the character of the parts he was taking.

Then like his father he would throw himself into the play with great personal energy and realism.

In the later years of his life he was intoxicated on the stage and made serious blunders in the text, forgetting his parts and substituting others. The managers were not sure of him. Hence he did not receive many engagements. He played with his brother on one or two occasions, but for some unknown reason this combination was not encouraged. It was supposed that he was jealous and did not receive the attention that he thought belonged to him.

In all probability he was not willing to play in subordinate parts and devote time and study that was requisite. He went around with strolling companies and his playing was irregular, sensational and uncertain. He made friends wherever he went, but in some way there was something flighty and uncertain about his mentality which his contemporaries regarded with suspicion.

The southern and western theatrical managers flattered him greatly and he grew to think that they were better judges of theatrical art, and when he appeared in the northern cities and received cold welcome, this embittered him against northern friends.

He had his father's emotional instability and, in the opinion of persons who knew him, could have been a great actor if he had only applied himself and studied as his brother did and given up the use of spirits.

He grew up among persons of intense southern sympathies, not in his immediate family, but in his associates outside and about Baltimore and Washington, he moved in a circle of the most extreme and excitable sympathizers for the southern cause.

He seems to have had no fixed convictions of special interest in the question of slavery or the various political topics of the hour, but was influenced largely by the society

that he was in and, while sharing their excitement, was only superficially interested. His associates were of the sensational class who talked of plots and schemes and plans to bring about great revolutions, but seldom took any chance or risk to themselves.

There was a theatrical side to this that appealed to him. The talk was startling and the occasional running the lines and carrying news to Richmond, and secreting prisoners, or furnishing them food and aid was dramatic and appealed to his imagination.

He evidently became very much excited and possibly proposed many schemes and plots which were discouraged by others.

His southern friends offered him a place in the Army and Navy and requested that he go into the service and take part in the great struggle but he declined, evidently from cowardice, giving as an excuse that he had promised his mother to keep out of the difficulty.

For the first two or three years of the war he was in and about Washington and Baltimore, playing at irregular intervals, drinking more or less, and associating with the most rabid southern sympathizers. He knew of all the plots and conspiracies and while not made a confidant, had heard many of the things talked over, and like others in the same circle, was very intense in his convictions and talk, but declined to materialize or take an active part.

As the great events moved on, a kind of theatrical ambition seemed to possess him to do something, and become an actor in some way in this drama. A desire to attain certain popularity possessed his mind and grew gradually into a veritable maniacal impulse.

Contemporaries mention that during this period he complained of neglect, seemed to be jealous of his brother, and thought fate was against him. His brother no doubt befriended him in many ways, but did not meet him, expressing to a friend in a letter, that John had gone crazy on the southern question.

His mental condition evidently grew more and more unstable. His irregularity of living and drinking increased.

Probably his irritation was greatly intensified by the discouragements and indifference of his southern friends who did not join and encourage the various schemes he proposed.

In all this there was a continuous growth of morbid impulses, delusions and manias.

SOME CONDITIONS WHICH MADE THE CRIME POSSIBLE.

The idea of killing the President or in some way preventing his inauguration began in Baltimore on the occasion of his passing through the city to take the oath of office in Washington.

A mob of passionate, unreasonable men tried to materialize this in some particular way but, lacking caution and organization, failed and their plots were frustrated. From this time a detective force sprang up and became the Secret Service of the Government and, as the war went on, grew into great proportions and efficiency.

It kept close watch of the various plots and schemes fostered to embarrass the Government, or kidnap or kill its officers. There were a large number of very desperate, reckless men in Washington, Baltimore, New York and Canada and other cities who were capable of committing almost any crime, but they lacked leaders, and were generally emotional, unreasonable men, who betrayed their purposes by their talk and conduct.

The Secret Service men kept in touch with all their movements and they realized this surveillance, and hence were cowardly and uncertain in their movements. While the air was full of plots and schemes to kill the President and Cabinet, blow up the White House and other extraordinary acts, there were fears of betrayal and failure and personal injury to the actors.

The cooler, more sensible men who would naturally be leaders, realized the risk and peril, both personal and to the interests of the cause, and while they listened to the talk and conspiracies, refused to be identified in any special way for fear of the direct consequences.

The Secret Service had its agent everywhere and, notwithstanding the greatest secrecy, there was suspicion of betrayal everywhere. The leaders at Richmond were always

in touch with these various schemes but cautiously hesitated about encouraging them with money and direct sympathy.

Very likely they lacked confidence in this uncertain class who talked loudly but failed to materialize in joining the army and giving direct personal help to the cause. As the war went on these various schemes of killing the President or his Cabinet or leading army officers were recognized as exceedingly doubtful aids to the cause, and almost certain to open up a new flood of events which would not only destroy the actors engaged in it and bring down vengeance on their supporters, but would make the issue uncertain and very likely raise up a new political element that would be disastrous.

Plots and schemes in Canada and a foreign country were very different from those of the big cities of the North where the Secret Service force might any moment arrest them and call their acts in question. Reckless men everywhere lacked leaders and organization. No one seemed willing to carry out any plan that involved loss of life and the authorities at Richmond took about the same position, refusing to give substantial encouragement in the way of money or direct assistance.

Many of the bolder ones about Washington were arrested. Others disappeared, going to Canada.

This caused great hesitation and timidity to carry out any schemes and conspiracies.

The popularity of the President and the success of the war indicated clearly the final triumph of the North, and this brought more confusion to the conspirators and fears of betrayal by weak-minded men in their own ranks. As in all other great events there was an army of men ready at a moment's notice to desert their friends, betray the cause and go over to the winning side; men who could be purchased to change their convictions or persuaded to do the very opposite thing that they had boasted of.

Let come what would, they would always join the majority. This was the condition when Booth's morbid impulses and mania began to take interest in the possibility of doing something personally and help on the conspirators.

The first project he seems to have been interested in was to kidnap the President.

This had been suggested many times before and several plans had been arranged, but all had failed for want of a leader and from fear and lack of co-operation.

Booth had heard many schemes and may no doubt have assisted in some way. There came a time when he was probably disgusted with what he termed the cowardice of others and proposed to take the matter up himself, personally. At this time he seems to have had no very strong convictions, except to become popular, or to take some part in the great drama.

He realized the rapid march of historic events and the sudden reputations that were coming to men who were obscure a short time before and probably his mania took on this form to do something, either tragic or dramatic or both, that would bring him into the prominence that he wished.

The scheme to kidnap the President had been talked over many times, and no doubt many plots had been laid out, but every now and then some leader would be arrested for some frivolous charge and confined for a short time, and this was an intimation that somebody had betrayed them and that the scheme had failed.

That these various plans did not materialize, evidently was regarded by Booth as cowardice. It evidently occurred to him that he could carry this out alone and become the leader, but when his plans were suggested to those who could help him, he was no doubt astonished at their indifference and refusal to aid or support him.

They evidently were suspicious of his ability to promote any scheme of this kind because of his erratic, impulsive manners and drinking habits. Finding himself unsupported by men who would naturally have joined him in the work he started out alone to work out the plans. He evidently received financial support from some source, and for a period of over two months he made journeys on different roads through Maryland to the Potomac, seeking acquaintances as a real estate agent, looking at horses and talking with

men about purchasing, but really finding roads and sympathizers who could be depended upon to assist him.

In all probability he suggested in a vague way and perhaps made confidants of different persons along a certain route, and very likely received assurances of their support. In all probability Dr. Mudd knew of his plans. He certainly became acquainted with him at this time. Years afterwards several persons who lived along this line, or projected route, acknowledged to have known of Booth's schemes.

For a period of several months Booth's movements were very obscure. He would disappear for two or three weeks. Then be seen back again in his old haunts. To some of his friends he was known to be in New York, Baltimore, Philadelphia and in all probability he journeyed to Canada.

During this time he was greatly intoxicated on several occasions and was known to have spent several days in disreputable houses. The plot to kidnap the President which Booth had prepared with such apparent care of details failed, no doubt from want of co-operation with persons who had promised assistance and from Booth's indecision and failure at the proper time.

The Secret Service kept close watch of the actors, or those who were supposed to engage in such a scheme. Several of them were arrested and others disappeared. It was evident that quite a number of persons were aware of the various plots that Booth was engaged in and very likely might have encouraged him by talk and evidently were very cautious about being seen in his company or being identified with him in any particular way.

After the homicide of Lincoln most of these men disappeared suddenly. The Secret Service was astonished at this and for a time believed that they were all in the plot as conspirators. Later it was found that while they had not actually opposed Booth's plans they were very cold and unsympathetic and not inclined to be identified with him.

Various stories have been told concerning the failure of this plot, but it was evident that it was Booth's own plans

and desire to do something sensational and to secure all the glory for it personally. He reasoned that kidnapping the President and carrying him to Richmond would force an issue that might result in the recognition of the Southern Confederacy.

This was no doubt the subject of conversation, but to Booth it was the sensational, dramatic incident of doing it, regardless of consequences.

The failure to succeed no doubt intensified his mania to try some other plans. The project to kill the President and the Cabinet had been talked over, but as the war went on, the folly of such an act was evident to the leaders and when Booth revised this old project these persons discouraged him and he was angered by their opposition and no doubt became more determined to carry it out.

An actor who had played with him on several occasions mentioned years afterwards that Booth had declared to him that the whole Southern Confederacy was managed by a set of cowards and that he personally could settle the difficulties at once and wipe out the Cabinet at Washington and the President. The actor said that he didn't believe Booth could do anything because he was drinking too much.

McCulloch, the actor, mentioned his going into Booth's room at the National Hotel a short time before the tragedy. He found him booted and spurred, studying a map laid out before him. Booth, not recognizing him, pointed a revolver at him and demanded why he intruded, showing an insane fear of some one doing violence to him. He apologized in a childish way, saying that he was so nervous that he did not know what he was doing.

The evidence of his increasing nervousness and excitability before the crime was noted by a number of persons. About the last work he did on the stage showed greater disability and instability than ever before. He apparently had less mental control, seemed more absent-minded and did unusual things, drinking all the time heavily.

In all probability the mania to kill the President was on Booth's mind and he was more or less distracted about the best plans and methods of doing it. It would have

been comparatively easy to have secreted himself about the grounds of the White House and killed the President and escaped without being known, but this did not seem to appeal to him. He had the craving for sensationalism and publicity.

It is altogether likely that he declared to his intimate friends his intentions to commit homicide, and they regarded it as the ravings of a maniac, not at all likely to materialize. It is quite a common thing among alcoholics to have homicidal manias, lasting for a few moments or hours and then dying out with a return of sanity, but with Booth these manias seemed to grow and become more and more intense.

Failing to receive the encouragement he hoped for, he became more and more suspicious and secretive, and the last two or three weeks before the crime he was in a condition to commit some desperate acts any time with the slightest provocation. His mania had taken on a reasoning form, but was unstable and confused as to conditions and surroundings and very likely to concentrate in most unexpected directions.

This fact came out years afterwards in the statements of persons who were in a position to know of the violent rage he displayed at the various meetings with his conspirators and with others shortly before the crime. Perhaps some objections were raised and some of the poor demented assassins showed cowardice and fear.

Booth's towering rage forced them to accept his views for the time being and held them to the purposes and plans he had projected. At least two or three persons who had tacitly consented to assist him were thoroughly frightened at his maniacal conduct and withdrew from all association with him, probably going over into the Southern lines and denying all knowledge of him or his acts.

The history up to this point was clearly that of a reasoning maniac, growing up and intensifying by the spirits he used and developing into a particular obsession to kill the President.

The death of the other members of the Cabinet and

of General Grant seems to have been of minor consideration, and the plans to carry this out were bungling and entrusted to inferior men that would naturally fail under any circumstances, showing that Booth did not consider this more than the setting of the great drama, the central act of which he himself was to be the great character.

THE CRIME.

The materialization of the insane impulse which had been growing in the mind of Booth for some little time was as he had planned it to be, intensely dramatic and sensational. It was a startling play in which he was to appear in the most vivid light and the other parts were to take care of themselves.

He was known to have drank several times that afternoon, and shortly before he went to the theatre he drank two glasses of brandy. He was seen in the theatre in the afternoon wandering around. It was then that he manipulated the door of the box which the President was to occupy, so that it could not be opened from without. He was seen at a livery stable where he hired a horse, with orders to have it saddled and brought to an alley back of a theatre.

His particularly nervous excitable manner and his glittering eye attracted the attention of several persons who sat in the gallery near the theatre box. He was noticed walking up and down the passage way to the box and was recognized by several persons. Evidently he stood there for a short time watching for an opportunity or, perhaps, hesitating how he should act. Then suddenly he dashed through the door, shot the President, had a clinch with a military aide, stabbed him with a knife, then jumped over the balustrade onto the stage.

His spurs caught on the flag, turned his ankle and caused him to fall heavily. He arose and shouted, "*Sic Semper Tyrannis!*" Then hobbled through the green room, back to the alley, mounted the horse and rode out of the city.

There was something pronouncedly maniacal about this act, particularly the boldness, to become known as the author and chief actor of the drama and boast of it before

the audience. A man without political interest, without any purpose to accomplish or principle to demonstrate, committing a deed so boldly and gloating over it, was profoundly insane.

Insanity with delusions of this kind, while very intense and prominent at the time, depends upon a great variety of accidents, any one of which would have altered or changed the act. Had Booth drank early in the evening, or had abstained an hour or two before the act, the irritant effect of alcohol would have worn off and his courage and boldness diminished and his power to carry out the plan would have varied.

Had the usual guard been on duty at the door of the box or had other military men been in the neighborhood, or had some one accosted him in the passage way or blocked his way, an assault would have followed, in which both pistol and knife might have been used and this would have changed the execution of the act. Had the President come in later in the evening or earlier, or had any other little event occurred, it is altogether probable that Booth would have failed to adapt himself to the changed circumstances and different acts would have followed.

His brain was in a high state of irritation from alcohol and a degree of narcotism already setting in and, although the morbid idea of homicide in the most startling conditions was dominant, it was not certain that he could carry out the details of his plans or adapt himself to the circumstances which would vary any moment except in the most bungling, uncertain way.

He certainly would have shot some one, whether the President or not. He was in such a high state of maniacal tension that the slightest change of conditions or surroundings would have altered the whole plan.

The sensational part was to kill the President and make it known that he was the author and the central figure and actor of the drama, and this was to be done in the theatre where he could secure the largest publicity. His maniacal reasoning turned on this point and the question of escape seemed of minor importance.

He very likely assumed that the sympathizers of the South would conceal him and cover up his movements in every way. He realized that their delight at the act would be so great that they would protect him at once. In this he had no doubt ignored the counsel of a great many of the leaders who pointed out the futility of this scheme and they probably doubted his ability to execute it.

Insane-like he took no account of the armies of soldiers and Secret Service men, and the rewards that would be offered for his arrest, that would tempt any man, no matter what his political convictions were, to betray him.

His broken ankle retarded his escape in some measure, but it was literally impossible to elude the vigilance of the soldiers and detectives, so that escape was practically impossible. This his insane brain did not recognize. Finally, after a short time, he was tracked to a barn where he was found in a condition still more insane and maniacal.

He had drunk spirits and a wild delirium of defiance broke out and continued to the last. The poor imbeciles whom he had inspired to carry out the various parts of the plot, failed in their bungling efforts and like their leaders, used alcohol to give them more courage, and were without reason or caution in their efforts to escape.

It is not unlikely that had Booth been sane he might have been fascinated by the historic significance of a tragedy of this kind, but his plans and the execution of the act would have been very different.

In the early part of the war there would have been some reasonable expectation of gains for the South by such an act, but at this time nothing could be accomplished.

The very publicity of the act and the absence of precaution to escape was most unreasonable. It is very doubtful if the execution of the crime would have been planned or attempted had it not been for the use of spirits, which destroyed the ordinary caution and judgment and gave him a sort of boldness and confidence, which for the time being was very pronounced.

There were other men about Washington and in other cities, who would have played any part in the tragedy with

greater courage and from principle and purpose, particularly if the results promised a reasonable security to themselves and a marked advantage to the Southern cause.

Many of them had been in the Southern army and knew what it was to sacrifice themselves for a principle. They realized that an act of this kind might precipitate the most serious consequences, perilous to both sides and particularly to the actors.

Booth had heard this talk and treated their hesitation as cowardice. Finally his weak brain settled down to the conviction that he would commit the act and force an issue no matter what the consequences would be. There was in this no principle or conviction, or regard for anything other than the publicity and the magnitude of the deed.

Booth was in a condition to commit any act that promised immense sensation and excitement, and his brain was the seat of conflicting emotions, both for secrecy and boldness. At one time he would court publicity; at another secrecy and concealment. In all there was a reckless disregard of sane conduct and sane reasoning concerning causes and effects.

There is seen in criminal courts many identical cases of inebriate maniacs who commit all sorts of violent crimes and actions without sense or reason and devoid of purpose or ordinary caution. Not infrequently such persons manifest delirium of exaltation, seeming to gloat over the act.

Not infrequently such persons are alcoholic paretics, suffering from delirium of grandeur and power to do extraordinary things. Booth's defective brain and his general degeneration from alcohol made it impossible for him to reason and act in a rational way, although when not drinking excessively, his sane conduct was automatic and to his friends he had the appearance of general sanity.

Alcohol covered up his real condition and intensified the morbid impulses which grew constantly from the surroundings. He had lost all sense of the relation of things, and the events of the times were not understood, except through his feeble alcoholic brain.

He saw only the dramatic side of the tragedy and the

removal of a leader and beyond that there was nothing of consequences or results that concerned him. He may have reasoned earlier that some good might follow from the act, but it was very evident that the one thought possessed his brain for the last few months to take the life of the President beyond any other considerations.

Such men are the most dangerous maniacs and are just now being recognized as persons who should be put away and protected from executing crimes of the most unreasonable character. Booth was the first maniac to take the life of a President.

The second was Giteau, who was equally a maniac, but of another type. He had no principle or purpose, except to secure certain prominence and change the order of events. He too believed that his act would be protected and supported by persons who would be benefited by it. The same delusional impulses pervaded his mind in a measure. He resorted to alcohol to give him courage to commit the crime.

The third was Czolgosz, a dement and similar maniac, having concealed morbid impulses and manias that something should happen, not only to make him prominent, but to help on some unknown cause by his act. Like the others he drank spirits before the crime and lived in a saloon and while not known as an inebriate, possessed a low grade brain that was still more insane from the effects of spirits.

These three maniacs are examples of a most dangerous class of persons seen both in and out of hospitals for the insane and prisons. They use alcohol, either to excess or moderation, sometimes show periods of sanity and act with reason and then suddenly commit the most unreasonable crimes without object or purpose.

Such persons possess unstable, defective organizations and are literally irresponsible and dangerous, although not recognized. Society and the courts still continue to recognize the old theory of free will and vice which can be corrected by punishment. This error is responsible for the continuation of this most dangerous class.

Such persons not only commit insane acts, but plan and

show a degree of cunning that is considered evidence of free will and consciousness of the situation. Punishment seems to intensify this condition, making many men reasoning maniacs and giving form and direction to their insane impulses, giving them certain pleasure in criminal conduct and efforts to evade the law.

Outside of this particular criminal class there is a still larger number of inebriate maniacs, not always drunkards, but men who live on beer, wine and spirits, whose delirious theories of life and misconceptions place them among the army of anarchists, socialists in the worse sense, agitators and wild reformers whose delirious theories point to an unbalanced, unreasonable brain.

Such persons are usually cowards who talk wildly but seldom materialize their extreme theories. They live on the frontiers of crime and insanity and are likely any moment to pass over the borderline and engage in some serious acts.

Booth's insanity was not recognized by the public at the time. The other assassins of the Presidents were not understood and were executed as sane and responsible. While alcohol was not so prominent in the two later assassins, it was undoubtedly a factor and indicated beyond question that given the poor feeble brain with unlimited opportunities to use spirits and crime will follow with the same certainty that plants come from seeds.

There are many poor, disabled men who use alcohol, which not only increases their disability, but destroys their reason and power of control. They are the persons always ready to form plots and to execute crime under favorable circumstances.

It is only a question of conditions and the exciting causes. They have all the requisites of delusion, manias and morbid impulses which only need concentration to materialize into crime. Saloons on every corner of the street are the schools for intensifying and making permanent manias and morbid impulses.

The same crimes are going on constantly and undoubtedly public men in the future will be killed by the same class. Wild denunciations of leaders and bitter recriminations of

men and events are almost certain to furnish favorable soil for the culmination of similar tragedies in almost every circle of life.

There are other Booth's, Giteau's and Czolgosz's roaming around unrestrained, who only need favorable circumstances and stimulating suggestions to commit similar tragedies. The yellow journals and the saloon are the books and schools for the growth and development of inebriate maniacs and delusional demented to commit crimes and atrocious acts.

A better public sentiment must break up these infected sources and suppress these exciting causes. Then it is possible to lock up and restrain this element that is certain to commit crime in the future.

PREVENTABLE NEUROSES.¹

By C. H. HUGHES, M. D.,

St. Louis, Mo.,

THE neuroses are the bane of life; social, political, professional and business. They impair, disturb, distort, paretise² and often paralyze endeavor in many fields of strenuous human effort. Through their harmful influence the dominant nervous system of man suffers more than, or quite as much as, from other disease, visceral, sanguineous, secretory, excretory or microbic, etc. As the under body-tone of bodily resistance brings on or opens the way for defective metabolism and impaired combat, microbic invasion often becomes fatally effective and triumphant. Man is doubly harmed thereby: harmed in his nerves, blood and other systems that sustain him when he is well and fighting the attacking elements of environment.

Man is a marvelous mechanism whose life and power of accomplishment are mainly in his nerve centers, blood and internal secretory systems and as the latter, with the frame, sustain the evolution and potency of the former, the blood has all to do with the integrity and power of the cell. Mortal man, marvellously wrought as he is, is a miracle of nature.

The machinery of the mind moves the world and its

1. Read by invitation before the Milwaukee 1910 Meeting of the American Public Health Association.

2. Partially Paralyze.

potent, though delicate mechanism, resides in the higher psychic neurone centers of the brain, supported by the lower neuronie aggregations governing the blood and serum supply and the nourishment and movement of the viscera.

It is no wonder then that in human affairs "enterprises of great pith and moment go oft awry and lose the name of action" by reason of defects in the wondrous mechanisms of functioning power we are considering in the aggregate man.

Nor is it strange that a body of men such as you gentlemen, accustomed as you are to considering this marvelous machinery of the human mind and organism, should wish to see it run smoothly, without mishap and for the good and not the harm of mankind and to devise and advise for its best conservation and repair and the safety of the race. Explosive disorders and other defective workings of the nervous system are perilous, not only to the single person, but to the race of our fellow man whom we would save for the best human capabilities from transmitted neuronie instability.

We do not want race suicide, but race suicide and oblivion were better than the survival of an overwhelming number of defectives. It is to avert such a calamity to humanity that we here and to-day give popular warning.

By the term neuroses, I mean both organic and functional disorders of the nervous system, as the latter are or have been up to a recent period regarded. For, as research extends and our intimate knowledge of neural aberrations accumulates, heretofore undiscoverable lesions underlying perverted nervous function, increasingly come to light under microscopic vision, either in nutrition of the neurone, axis cylinder, neurilemma, nourishing serum, vascular supply or up-building plasma of immediate or ancestral molecule. The neuroses, like visceral diseases, are, under proper circumstances of immediate or remote evolution, preventable.

The only questions are how and when and why—prevention may be accomplished, both within and without the organism. One grand essential, lest we forget, may be mentioned here and accomplished now, at the entrance gates

of the Republic, too freely opened yet, to the neuropathically defective hordes of Southern European degenerates and moral perverts, where too many daily enter to contaminate our future population. We take more pains at Castle Garden or Fire Island to keep out certain diseases of the eye and contagions, than to disbar from entrance obscure diseases of the brain and spinal cord and sympathetic nervous system. Yet the latter may bring never ending misery, ending with racial decay and extinction.

We look more keenly there to exclude diseases of the body than affections of the blood, nerves and brain, yet the latter are more fatal in the long run to the vital stability of our citizenship and national personnel—and the stability of a house intended to stand for ages depends upon the stability and strength of its construction material—its individual foundation of bricks and stones, girders and stanchions and walls and roof and the way they are put together.

A story of that sorely tried patriarch of old who had much trouble with his people to keep them in the straight and narrow ways of moral propriety and spiritual fealty and who established some excellent personal and general sanitary regulations for their welfare, being the first known propounder of a pure food law and who seems to have had right anti-preputial conceptions for his peculiar people,* admonished them in gastronomic simile in which he included the inferior animal—the horse and the ass, for illustration—that they “did not consider” their welfare. Though I make no claim to Mosaic wisdom, I am here to advise our people just now as they are on the eve of a great sanitary awakening, in regard to some things they do not adequately consider concerning the importance and pressing necessity of united, determined, prompt and effective action for the preservation of our race from impending neurotic degeneracy and decadence, to say nothing of racial suicide, by ostracism of those unfit to propagate their kind with organisms worthy to endure and live for the good of the race and nation.

And just here it may be remarked that racial suicide

*The male element thereof.

may be accomplished by conjugal commission through conception and propagation of the unfit to live and procreate their pernicious unfit kind, as well as by preventions of conception, and, it is fortunate that certain anthropologically disastrous conceptions are prevented, though by certain unlawful means Malthus never dreamed of, in his fearful prognostication of the world's becoming over-populated.

Many of the unfit and unworthy of parenthood also, fortunately for the protection of the race from moral depravity alone, contribute to the depopulation and premature decadence of their pernicious kind. They do not want the burden and care of children and will not have them.

The problems of our day are to discourage the propagation and to encourage the preconceptional suicide of certain undesirables or their after sequestration and asexualization, because they are unfit to live and because they burden and embarrass the well meaning, well doing world.

To prevent this pernicious sort of living being and promote the propagation of the worthy to live and perpetuate himself physically, mentally and morally in posterity for the good of himself, his family, society, the state and the world should be our purpose. The aim of our modern, better aspiring life should be to protect and increase human capacity, efficiency and social congruity by neurologic and psychologic sanitation.

Herodotus in his history of the customs of the Babylonian people gives this curious and pertinent record of a marriage custom, fallen into merited disuse in that historian's day, though Herodotus himself approved it as "the best of all their customs," yet we think it a most vicious one.

Herodotus says of their customs, "the following (which I understand belongs to them (the Babylonians) in common with the Illyrian of the Eneti), is the wisest in my judgment. Once every year in each village the maidens of age to marry were collected all together into one place, while the men stood around them in a circle. Then the herald called up the damsels one by one and offered them for sale. He began with the most beautiful. When she was sold for no small sum of money, he offered for sale the one who came next to

her in beauty. All of them were sold to be wives. The richest of the Babylonians who wished to wed, bid against each other for the loveliest maidens, while the humbler wife-seekers, who were indifferent about beauty, took the more homely damsels with marriage-portions. For the custom was that when the herald had gone through the whole number of the beautiful damsels, he should then call up the ugliest—a cripple if there chanced to be one, and offer her to the men, asking who would agree to take her with the smallest marriage-portion. And the man who offered to take the smallest sum had her assigned to him. The marriage-portions were furnished by the money paid for the beautiful damsels, and thus the fairer maidens portioned out the uglier. No one was allowed to give his daughters in marriage to the man of his choice, nor might any one carry away the damsel whom he had purchased without finding bail really and truly to make her his wife; if, however, it turned out that they did not agree, the money might be paid back. All who liked might come even from distant villages and bid for the women."

In this monetary matrimonial mating method neither Cupid nor cardio-psychic affinities, nor natural selection had any part. The handsome women were assigned to the financially fortunate, the unfortunate and the maimed and marred in face, in mind and body were coupled together. Defective, ugly, ungainly and incapable were joined, to perpetuate mutual ugliness, deformity and misery. This vicious custom, though not carried on by public auction in our day, yet goes on by private choice and purchase and human defect and degeneracy are perpetuated and compounded by the breeding in and in of human defectives not countenanced in the raising of the lower animals.

The hereditary neuroses are evolved, intensified and handed on from father and mother to son and daughter and from generation to generation. We plead for a suspension of this vicious process of propagated misery, degradation and decay. We plead for the prenatal rights of the unborn—the rights of the unborn to remedy, in the line of averting, by sanitary prenuptial surveillance and prevention of the unfit for matrimony and for the physical disqualification, by human

surgical preventive remedy, or otherwise, of both sexes against the gravely neuropathic and the libidiously criminal. Why could not organized, stable, responsible and capable society prevent the hordes of neurotic incompetents that now fill our alms houses, jails, penitentiaries and public eleemosynary institutions? Why should we not cause idiocy, epilepsy, feeble-mindedness, insanity and other mental and neurotic infirmities and incapacities to cease, in far greater measure than now, by rational humane and just prevention?

Instead of caring only for the ever-increasing effects why not have a care for the removal of causes and the arrest of these scourges of civilization? Why not cut off the supply by better penal methods of the grossly criminal and vicious class of neurotics by means of preventive medicine, surgery and legitimate sequestration?

Why permit the possibility of the perpetuation of the perverts and the criminal insane, epileptic, idiots and the degenerates, like the Jukes and the Pomeroyes and the degenerate family records of Morel? And the "car barn bandits" who were hanged some years ago for murder and robbery and for whom Lydston³ in 1895 proposed resection of the vas differentia. This operation timely performed on their vicious fathers, or oophorectomy in the mothers, would have prevented later crime and vice, making offspring to them an impossibility.

These and Morel's⁴ records of inebriety and the history

3. Diseases of Society.

4. The researches of Morel into the formation of degenerate or morbid varieties of the human race have served to furnish to the philosophical mind the chain of events by which alcoholism as a cause of individual degeneracy continues its morbid action through generations and finally issues, when unchecked by the arts of our profession, in extinction of the family. Here is the observation of Morel:—

First generation.—Immorality, alcoholic excess, brutal degradation.

Second generation.—Hereditary drunkenness, maniacal attacks, general paralysis.

Third generation.—Sobriety, hypochondria, Lypemania, systematic mania, homicidal tendencies.

Fourth generation.—Feeble intelligence, stupidity, first attack of mania at sixteen, transition to complete idiocy and probable extinction of family.

How many painfully impressive pictures like this have we not seen in our several spheres of observation and practice, and how many impending family calamities like this are now avertable through the resources of medicine and philanthropy which our present advanced neurology offers the neuropathically unstable? It is a source of professional congratulation that the medical profession, and especially the neuropathic and psychopathic departments of professional endeavor, has brought relief to the inebriate, and mitigation, with the hope of ultimate extinction of its entailed neuropathic evils to the human family if only aided through you by adequate public co-operation. Abstracted in quotation from author's contribution to *Management of Inebriety, Alienist and Neurologist*, January, 1894.

of disease born criminality should "give us pause" for shuddering reflection at our racial peril.

Why allow hopeless transmissible dipsomania and besotted inebriety to transmit its pernicious kind to mar posterity and blot the world with widows' tears and orphans' wails and ruined homes and broken hearts?

The neuroses are preventable; all of them, by right methods, correct present and ancestral living and safe-guarding of our country's portals from further neurotic degeneracy from certain parts of Europe, by beginning with the present generation of defectives and making the perpetuation of their pernicious kind an impossibility.

What a conservative remedy for moral depravity asexualization would be if it were a religious rite with certain of our human importations. The blessing of premature family extinction would be the greatest of blessings for such and for humanity.

The neuroses may be prevented by less overstrain upon and more enlightenment as to vicious and nerve energy exhausting habits, imparted to school children and mothers and fathers and by restraint and temperance or abstinence as to alcoholics and narcotics, by adequate rest and sleep enjoined and acquired, together with abundant suitable nutrition and a reasonable and complete freedom for a considerable part of every day, the night time certainly, from all the needless noises of a large city and especially from those outrageous night time bursts of noise which city fools and the otherwise thoughtless, delight in making and by less street railroad and joy riding auto noise of nights. American cities could have quiet street railways as Berlin has.

Epilepsy and insanity, the gravest of the neuroses, with hysteria, St. Vitus dance, psychasthenia, etc., are, to a large extent, preventable in the individual by the right choosing of ancestors of the child, for these maladies are usually the result of two or more generations, with the same or similar brain defect inherent psychopathically or venereally, tuberculotically or alcoholically engendered or a tendency thereto caused by immediately induced brain overstrain, alcoholism, etc., or to an otherwise exhausting life as above men-

tioned, giving neuropathic predisposition in the child or a direct traumatism or febrile toxhemia.

The matrimonially inclined, wishing no neurotically defective offspring, should mate with a knowledge of ancestral exemption, for an acquired tendency is exceptional, if there is no ancestral hereditary factor. A word to the wise for personal or patriotic consideration ought to be sufficient on this grave subject.

When the bubonic plague or cholera approaches, the people become alarmed and vigilant, but no plague, however destructive, can equal the insidious degeneracy that, through decay of the nervous system, exhausts the individual and collective vitality of a people and imperils the ultimate stability and perpetuity of their government.

Cerebropathic with psychopathic decay is a fatal fault in any nation. Tuberculosis and other diseases and alcoholism are all its common sequels, syphilis is its frequent predecessor and both often accompany it. With these pervading a nation its final extinction is a certainty. Let care be taken alike for the brains as well as the bodies of the people.

IMBECILITY AND THE INSANITY OF IMBECILITY
OR DEMENTIA PRAECOX BEFORE THE LAW.

THE STATE OF MISSOURI VS. BENJ. F. CRONENBOLD,
CHARGED WITH MURDER IN THE FIRST DEGREE,
ST. LOUIS CRIMINAL COURT.* MURDER BY
SUGGESTION.

A Medico-Legal Record republished with Comments
By C. H. Hughes, M. D., St. Louis, Mo.

“THE feelings of horror and vengeance excited by the bloody deeds of the insane, completely unfit the popular mind for a careful and impartial investigation of the plea of insanity, and ought to convince us that the mental condition of the accused,” when insanity is suspected, “should be examined by men who have become fitted for such duties by a peculiar course of study and experience.” “It is not necessary to go into a labored argument to prove that this method of determining the grave and delicate question of insanity, must be infinitely more satisfactory than that of summoning medical witnesses to the trial—most of whom have but very imperfect notions of the disease, and probably have not had the least communication with the accused—and forcing out their evidence amid the embarrassment produced by the queries of ingenious counsel, bent on puzzling and distracting their minds. If a physician, after listening to divers vague and rambling details concerning a person's ill-health, and looking at him across the apartment, without being permitted to address to him a single word, or lay a finger on his person, should then be required to say, on his oath, whether or not the individual in question were laboring under inflammation of the lungs, bowels or kidneys, he would scarcely restrain a smile at the stupidity which should expect a satisfactory answer.” “And yet, absurd and foolish as such a course would be considered in the abstract, it is the only one recognized by our

*October Term, 1874, Judge Wilson Primm presiding.

laws, when the disease, whose existence or non-existence is to be determined, happens to be insanity." "When mental derangement is suspected, there are many physical symptoms and numerous other circumstances that can not be investigated in an hour or day, but require a course of diligent observation that may occupy weeks or months before the suspicion can be confirmed or disproved."

Thus long ago wrote almost *verbatim*, as we have penned it, our venerable *confre*re, Dr. Isaac Ray, in the first edition of his excellent work on the Jurisprudence of Insanity, and the words still stand in the latest editions, as scientifically true as they were when first they were uttered. And they have begun to bear their legitimate fruit in the Criminal Jurisprudence of the United States, in the substitution of commissions of specially skilled medical experts, in lieu of the ordinary jury, to pass upon the question of mental unsoundness when raised in criminal cases, so that the conclusion of the afore-mentioned authority,—“that in criminal cases, where insanity is pleaded in defence, the ends of justice would be best promoted by the appointment of a special commission, consisting of men who possess a well earned reputation in the knowledge and management of mental derangement, who should proceed to the examination of the accused, with the coolness and impartiality proper to scientific inquiries,”¹ will probably soon become the rule of action in these cases, throughout the whole Union.

New York has taken the initiatory by statutory enactment, and it is to be hoped that Missouri will at once imitate her example. One of the courts of the latter State has recently practically adopted the course now enjoined by statute in New York, in the case of “The State of Missouri *vs.* Benj. F. Cronenbold, indicted for Murder in the First Degree.”

A commission of experts was appointed by the court, sworn to discharge their duty faithfully, and empowered to send for persons and papers, to examine witnesses under oath, to make personal examination of the prisoner, and

1. Ray's Jurispru. Insan., p. 70, 4th edition.

otherwise proceed as their judgments might suggest; their decision to determine the question as to the disposition of the prisoner, and the further progress of the trial.

The principal attorney for the defence was put under oath as to the possession of any facts which might bear upon the question of feigning, and every thing was done by the court, the prosecution and the counsel for the defence to elicit the whole truth, even to the volunteer aid, proffered by the attorneys, on both sides, to examine witnesses.

Nothing was lacking in the whole procedure to ascertain the exact truth, except the absence of rebutting testimony, and the presumable legal incompetency of the commission to determine the precise legal value of the testimony of witnesses. The prosecution, however, had no testimony to offer in rebuttal of the issue of insanity.

It might be better, however, if in all future commissions of a similar character, the commission should sit and examine the witnesses in the presence of the court. In the present case, the presence of the court was not essential.

The following history of this remarkable case embraces all the essential facts connected therewith, together with so much of the prisoner's life history, as was deemed necessary to enable the commission to form a correct judgment on the question before them.

In the narration much irrelevant detail of the official records is here sacrificed for the sake of brevity.

HISTORY.

Benjamin F. Cronenbold is twenty-three years of age, American born, of German parentage. On December 9th, 1873, he shot and killed Richard Boetticher, who, at the time, was betrothed to his (Cronenbold's) sister. The homicide was committed on the eve fixed for the nuptials, and while the bridegroom, accompanied by his spouse and her mother, was leaving the Cronenbold residence, to have the ceremony performed at church.

The murdered man, Boetticher, was a coachman and head servant in the Cronenbold family, introduced to the

family, and employed by Cronenbold, who was at the time, himself, engaged to be married to a former female domestic in the same household. To break off his match, which the mother and uncle disapproved, (Cronenbold's father was not living,) the son was induced to go to Europe, in April, 1873, but returned after a brief tour, and three months before he killed Boetticher, with no abatement in his attachment for Miss Hendricks, his affianced. After his return he heard of boasts having been made by the deceased, (Boetticher,) reflecting upon the chastity of his mother and sister, and on the fourth of December, his mother informed him that his sister and Boetticher were to be married that evening. The same day he received an anonymous letter, reciting slanderous rumors in circulation, respecting his mother's and sister's virtue, having their foundation in the statements made in public by his sister's intended husband, and urging him to vindicate the honor of the family, by visiting summary vengeance upon the defamer of his mother and sister.

That evening, (December 4th,) he prevented the attempted consummation of the nuptials, by shooting Boetticher in the leg, and when the next attempt to marry his sister was made, (December 9th, as already stated,) the homicide was committed.

The rumors and the anonymous letter produced great agitation and excitement in the mind of Cronenbold, which culminated in the killing, and ended as we shall see hereafter, in complete mental and physical exhaustion. After his arrest and incarceration, Cronenbold seems not to have reasoned upon either the propriety or consistency of his conduct in killing Boetticher, or to have reflected upon the consequences of the murder, to his family or himself.

Boetticher, if he had seduced Cronenbold's mother and sister, of which there was no evidence to Cronenbold's mind, except rumor, having its probable foundation in the statement of Boetticher, over his beer, in a saloon, was about to go far towards giving the lie to such statements, and make the only reparation possible, by an unsolicited and voluntary matrimonial alliance with the family. Cronen-

bold made no effort to obtain the exact truth or falsity of the statements attributed to the murdered man. He did not make use of even the most ordinary diligence, to assure himself of any sort of justification in the eyes of the public, for the deed he was about to commit, in so open and undisguised a manner. There was indeed, no evidence to show that the boasts of Boetticher were founded on facts. There was no evidence that the social disparity between Boetticher and Cronenbold's sister, influenced Cronenbold to commit the murder. Boetticher lived on terms of familiar equality with the Cronenbold family, although their chief servant, and was in no way inferior to the servant girl, whom Cronenbold intended to marry.

Cronenbold even looked up to Boetticher as one possessed of superior mental endowments to himself, which was indeed the fact, as will be shown hereafter. He seems to have had no rational justification to himself whatever, evolved from the operation of his own mind, for the committal of the deed, but gave at the coroner's inquest, the *imbecile reason*, that "*they told him he ought to do it*," meaning by "they," those who had heard the afore-mentioned rumors, and were concerned in the anonymous letter, and he seems to have regarded this as an all-sufficient justification.

He does not say to the coroner, that the virtue of his mother and sister had been defamed, the good name of his family destroyed, and he was impelled, in a fit of fury, to avenge their dishonor.

He makes no attempt at escape, denial or evasion of the act. Before the coroner he manifests no real appreciation of the momentous importance of the examination to his own future. He maintains neither silence, nor reserve on any subject, but answers, without individuality, pretty much as the interrogatories of the coroner lead him, without appearing to comprehend the ultimate weight and significance of his replies against himself. His answers are mostly in short sentences, and not always intelligible, although in the examination by the coroner, who was incapable of forming a correct judgment as to his mental *status*, lan-

guage, and a combination of expressions, are attributed to him, which he had not the mental capacity to frame, or to express, (if framed for him) in so ready a manner. He says not a word in palliation of his crime, and under the interrogatories and promptings, and leading questions of the coroner, whose hypothesis is evidently unjustifiable murder, he weaves for himself a web of criminality, from the meshes of which, no sane man could possibly escape, and he is either unconcerned or unconscious of the part he is taking in constructing this net. In a subsequent examination, March 21st, 1874, before the Court of Criminal Correction, "He had so little comprehension of his situation, that when the examination was closed, and he was remanded to jail, he thought that his trial was over and that he might go free."

In jail, when his attorneys, friends or physicians visited him, he never introduced any subject of conversation, but would sustain, in an imperfect and unsatisfactory manner, a conversation conducted by interrogatories propounded to him, to which he would contribute, in a capricious way, replies in monosyllables or short sentences, sometimes pertinent to the subject, but often irrelevant. For example, when his intended wife was present at one of the writer's interviews, the writer asked him in an undertone, and unobserved by her, "if she was his sweetheart," to which he replied, "yes, sometimes." To the salutation, "good afternoon, how do you feel to-day?" he responded, "I feel well enough, but it don't correspond."

His counsel never received a suggestion from him, concerning the conduct of the trial, and he asked them no questions, except to inquire, without much concern or emotion, as to when they would be through with him, or when it would be over. When the writer would ask what he meant by "it" in this connection, he would never answer unless the interrogator suggested the answer. thus, "do you mean the trial?" to which he would respond "yes." In the same way he would indicate that by the term "it," he meant the court, by saying "yes," when the court was suggested by the interrogatory.

He had private apartments in the infirmary of the

jail, (which was empty of patients,) and a private servant to attend him, night and day, but did not seem to regard this as a favor or privilege, but several times asked why he could not have a cell, and "be with the others," meaning the other prisoners.

He never introduced any subject of conversation with any one. He was unsatisfactory and indifferent, alike to his mother, his sister, his betrothed, his attendant, his counsel, and his physicians. The writer made him seventeen or eighteen visits, sometimes in company with others, but mostly alone, observing him at meal times, between meals, and when asleep, and watching him during his wakeful hours of nights when he did not know he was the subject of observation. He was always the same. Indifferent to his dress and surroundings, eating mechanically and in silence, what was set before him, taking his medicines generally in the same way, though occasionally refusing the latter, when no amount of persuasion could induce him to take them, reading mechanically and without reflection when his book or paper was right side up, and conversing in his peculiar way only when led to talk by the psychological influence or commanding and resistless manner of a superior mind.

He never appeared unconscious of the murder, but was always unconcerned or unconscious as to its real effect upon the peace and happiness of his family or himself.

This was his mental condition, in his best states of physical health. He never betrayed either remorse or exultation over the homicide, and was entirely devoid of emotion of any kind on the subject. No subject whatever seemed to excite or interest him in a rational way. He would sometimes manifest a little ill-defined and transitory feeling at being restrained of his liberty, and was at times displeased with his "sweetheart." In his amiable or rather less indifferent moods he never returned her caresses, and was indifferent alike to the *souvenirs* which she often brought him, and to her assiduous efforts in various ways to excite a reciprocal affection, while he would evince displeasure, when she would remain longer than usual away from him.

Cronenbold before the coroner, and Cronenbold before

the court, were two different persons. Before the coroner he appears as the imbecile, extenuating his crime for which life is the lawful forfeit, with the logic of a child. He tells the coroner he committed the deed "because he had been told to do it." How like a child. Before the court he betrays a degree of mental weakness, far greater than that which was natural to him. Here there is manifest an aggravated impairment of all his powers, the result of disease. Imbecility is arrested cerebral development, and is not progressive, either upwards or downwards, except through assiduous training and consequent cerebral and mental growth on the one hand, and on the other, through the retrogressive processes of disease. (psychasthenia.)²

The degree of mental power of the imbecile, though susceptible of some improvement by education, depends upon the period at which the arrested cerebral growth takes place. There is a wide mental chasm between the lesser degrees of imbecility, and the ordinarily recognized grades of idiocy. Cronenbold was by nature imbecile in the ordinary mental attributes of mankind. Before the coroner he displayed a weak mind, before the Court of Criminal Correction he displayed no mind. (dementia.) He was not born an idiot, but had become much like an idiot. He had become demented through disease, as the following facts in his history, subsequent to his appearance before the coroner, and prior to his examination before the Court of Criminal Correction, show.

Soon after his incarceration in jail, there supervened a condition of extreme nervous exhaustion; so extreme was the depression of all the powers of life, that he could not turn himself in bed; liquid nourishment, the only food it was possible to administer, had to be poured down his throat, the urine had to be evacuated with the catheter, and persistent insomnia could be overcome only by morphia, by hypodermic injection and large doses of chloral hydrate and bromide (at nights.) He was obstinately constipated, and required the most active cathartics and clysters, even

2. Ray, 4th edition, p. 119.

when not under the influence of opium. His temperature was much of the time above normal, his pulse was quick and frequent, and pupils dilated in the beginning of his attack. His gaze was meaningless, and his mind almost a blank, so that his family physicians, the Drs. Engleman, despaired of his recovery. He was skillfully treated with reconstructive tonics and calmatives of the nervous system, so that by March 21, 1874, something over three months from the beginning of his treatment he had sufficiently recovered his physical health to appear before the Court of Criminal Correction, for preliminary examination. The imbecility of Cronenbold was not sufficient to account for all of his acts before the homicide and imprisonment.

It must be borne in mind, that in imbecility, as in other abnormal conditions, there is not only deficiency and irregularity, but also a great tendency to diseased cerebral action, and this was the case with the accused, not only as we have shown, while in prison, but before. His dementia was preceded by delusions and vague feelings of dread and suspicion, and by an impression that he was not properly appreciated after his return from Europe, (paranoidal egoism and delusion.)

He said that during the last three nights, while on his return home, he had not slept, and that he had reached home too soon. Although his home was in the city, he took apartments at a first-class hotel, to "wait until he made up the time." He expected his friends to meet him, though he had not notified them of his arrival. (Sent his card home and expected to be called on as an important person at the hotel by his father and mother.) (Exaggerated Ego.)³

When he went home, he asked his mother if she was his mother, and if that was their house, though neither had undergone much change during his less than six months absence. He knelt before the picture of his father, and prayed him to avert a calamity which he felt was impending. He suspected the purity of his food, and would not eat it until after it had been inspected by his affianced, and passed to him and pronounced all right by her.

3. Inserted since original writing.

His appetite was capricious. His conduct in various ways was singular. He would lock himself in his room and remain there several days, and not come out even to eat. On one occasion, he fired a pistol up in the air in his mother's presence, without notifying her of his intention. He was quarrelsome and excitable at the table, and would fly into a passion, and throw dishes about without apparent cause, but everything connected with the murder on his part, showed the *design* of a weak, rather than the *motiveless* or *delusional* act of the deranged mind.

He bought the pistol, and shot Boetticher just in time to prevent the consummation of that which he sought to thwart. If he had delusions, or what he thought about the dishonor of his sister and mother does not appear. He was not under medical observation at the time, or immediately preceding the homicide, consequently his precise mental *status* can not be determined.

He was in a state of great excitement from the time he learned of his sister's engagement, heard the rumors about his mother and sister, and received the anonymous letter, until after he had killed Boetticher, when the prostration of all his powers became manifest, as already described.

It was at this stage in his history, though after he had improved in physical health, that his counsel, in May, 1874, asked a consultation of medical gentlemen, to determine his mental condition. The circuit attorney agreed to the proposal of defendant's counsel, Lieut. Gov. Johnson, Joseph G. Lodge and L. Gottschalk, and recommended the court to appoint a commission of five medical experts to examine into the present mental condition of the defendant; the counsel for the prisoner holding that, in accordance with common law, no defendant could, under any circumstances, be tried for an offense when in an unsound state of mind, he being incompetent to make a defense when in such a condition. (This proceeding as well as the associate experts selected being suggested by the writer hereof.)

The court acceded to the request and made the following order:

"It being suggested to the court by the circuit attorney, and by the counsel for the defendant, that Cronenbold is now mentally insane, so that he cannot be tried at this time upon the indictment preferred against him; therefore, on motion of the circuit attorney and of the counsel for the defendant, the court doth hereby appoint as experts, Drs. Chas. W. Stevens, J. K. Bauduy, C. H. Hughes, W. B. Hazard and George Engleman, physicians of name and fame of the city of St. Louis, whose duty it shall be to make inquiry into the mental condition of the defendant, and make report to this court, at their earliest convenience, of their opinion touching the matter of said alleged insanity, such report to be in writing, signed by them, and verified by affidavit in open court."

The conclusion of the consultation, based upon personal interviews, and such of the prisoner's history as they had before them, was "imbecility," making no reference to the prisoner's insanity, it being evident that no harmonious conclusion as to the kind or degree of insanity the prisoner may have had, could have been promptly reached, as what follows will show. For the same reason they wisely abstained from attempting to define the degree of imbecility. The writer's conclusion of imbecility was based:

1st. Upon the reason which he gave the coroner for the deed, and the absence of all individuality in the presence of the coroner, and of a due appreciation of his situation.

2d. His indifference as to the result of his act to himself, and to his family. "Such conduct, not only displays insensibility, which is not rare in hardened criminals, but betokens the mind of a child, and indicates stupidity, silliness and imbecility"⁴ in one of Cronenbold's age.

3d. His personal appearance, physical characteristics, and life history. He was feeble and diminutive in body, his face was pale and inanimate in appearance, his eye restless and without expression, his whole make up and demeanor, revealed to an expert, more than any description can impart, his real mental state. When addressed, as we have

4. Ray's Juris. Insan., 4th Ed., p. 119.

stated, the monosyllabic responses, or short sentences in which he would answer, required and indicated little capacity for complex mental effort and the frequent irrelevancy of his answers, betrayed a confusion of mind, and an inadequate conception of the circumstances surrounding him, which could not be feigned. He was too consistently stupid for simulation. From first to last he never sought, nor had a private interview with his attorneys, nor did he have any choice or desire to have choice in their selection. His whole manner was passive, he was an automaton, with the power of feeble mental motion within himself, but set in motion, and moved by others.⁵ He was first the imbecile, and next the dement; a naturally weak mind, "by reason of a bad descent, born with a predisposition to insanity," yielding under the stress of adverse events, to disease, and progressing still further towards mental extinction.

As with families in whom that native constitution of nervous element exists, there is always, under adverse circumstances, a retrograde degeneration, so with individuals. In the imbecile, if life continues into full manhood, we expect mental retrogression, rather than progression. The brain inherently feeble, like the naturally weak body, is more liable than the naturally sound and healthy mental or physical organization to take on diseased action.

We have spoken of Cronenbold, never taking the initiatory in conversation. He had always to be pressed by leading questions, to obtain anything from him, equally upon subjects of vital interest to himself, as on the most trivial matters. To him grave and light subjects seemed of equal significance.

One of the medical gentlemen, Dr. Stevens, was personally acquainted with Cronenbold from the latter's early childhood, and gave his opinion, as to his feeble mindedness, as compared with the average youth and young man of his age, from many years observation, and from what he knew of Cronenbold senior's opinion of the mental capacity of his son. A long time before the homicide, he had heard the

5. No mental spontaneity or power of initiative.

father of Cronenbold lament his son's lack of capacity, and say he thought he would never be able to take care of himself.

We think Cronenbold's facial angle is not far from 80,' though it was not measured. His height is five feet three and three-quarter inches, in his boots. He never objected to, nor asked our object in measuring his head, and did not seem to think it strange. The measurements are as follows:

Circumference, (occipito-fronto-parietal.) 20 $\frac{1}{4}$ in.
 Bi-parietal diameter, (between the meatuses,) . . . 5 $\frac{1}{2}$ in.
 Longest antero-posterior curvature, from occipital
 protuberance to root of nose 11 $\frac{7}{8}$ in.

We give these measurements, as a matter of fact, for what they may be worth. The cranial measurements are slightly below the average, and comport with the actual natural state of Cronenbold's mind, though under very favorable antecedent ancestral conditions and subsequent favorable circumstances, from birth to the present time, he might, even with such cranial capacity, have passed on through life with average intelligence.

In giving the cranial measurements we would not have it inferred that cranial deformity *always* exists in imbecility.

There are even "many *idiots* in whom the brain and body appear to be well formed, while the mental development remains at the lowest stage; accidental affections of the brain, arresting its development after birth, while the cranium and rest of the body go through their normal growth, have occurred in some of these cases; epilepsy is not uncommonly such a cause of idiocy," as he who writes, and most of those who will read this paper, know from personal observation, but it is equally impossible, as Maudsley says, in some of these cases, to assign any definite cause of the arrest of development. There may be no sign of mental degeneracy in arrest or deformity of cranial development, and yet be "abundant physical cause of psychical defect, in the constitution of the molecules of the cerebral mass, without our being able to recognize them; molecular conditions which belong to that inner life of nature, that is still impenetrable to our most delicate means of investigation,

still inaccessible to our most subtle inquiries." (Maudsley.)

We can not expect to gauge with accuracy, the precise degree of mental capacity from cerebral measurements, inasmuch as we can not yet discern even "the nature of those hidden molecular activities, which are the direct causes of the different tastes and smells," those different molecular activities themselves depending, doubtless, upon structural differences in the nerve molecules of the auditory and gustatory nerves, or at their seats within the brain. Nevertheless, the greater proportion of imbeciles and idiots, are found to have the development of both mind and body arrested, and we may, with Maudsley, and all others, who have given the subject much attention, draw from our observation of these unfortunates, "the certain conclusion that there may, by reason of unknown conditions affecting nutrition, be every degree of imperfect development of mind and body, down to actual incapacity to develop at all." When we find cranial deficiency or deformity, conjoined with mental weakness, we may safely conclude that the imbecility is congenital and lasting. The writer speaks only for himself, as to the manner, in which the conclusion of imbecility was reached, and is aware how "impossible it is to specify any particular rules for ascertaining the mental capacity of imbecile persons, how circumstances always proper to be taken into account, are constantly varying with each individual case."⁶ Few cases, says the writer just quoted, subjected to legal inquiry, are more calculated to puzzle the understandings of courts and juries, to mock the wisdom of the learned, and baffle the acuteness of the shrewd, than those connected with questions of inbecility.

Such cases as Cronenbold's, without the supervention of insanity, become, as an eminent writer truly observes, "difficult cases for medico-legal inquiry, in which the decision come to, whatever it may be, may be challenged, and not without reason." (Maudsley.)

"Much of the difficulty consists, no doubt, in a want of that practical tact which is obtained by experience in un-

6. Ray, p. 131.

ravelling their intricacies, and of that knowledge of the psychological nature of this condition of mind which directs the attention, exclusively, to the real question at issue.⁷ Had no question been decided but that of imbecility, the question would still have remained to what extent was the prisoner responsible for his crime, and Cronenbold's escape from a felon's punishment, would have been doubtful, for "little indulgence" has ever been shown to the plea of imbecility, in criminal courts, and none could have been expected here, where the individual had acquired some education, and been assiduously taught the proprieties and amenities of good society; "his weakness concealed, and polished over by cultivation. While the public feeling has become too refined to tolerate the infliction of blows and stripes on the imbecile and the mad, in the institutions where they are confined, * * * it can still be gratified by gazing on the dying agonies of a being unable to comprehend the connection between his crime and the penalties attached to it, and utterly insensible to the nature of his awful situation. The voice of reason and humanity, which speaks successfully in the first instance, is in the last, drowned by the more imperious tones of prejudice and passion."⁸ The following extract from a daily paper, published at the time the case of Cronenbold was engaging public attention, shows this to be true:

"Cronenbold was admitted to bail by the Judge of the Criminal Court on Tuesday, 6th inst. Cronenbold, it will be remembered, killed his sister's intended husband so as to save the family the disgrace of being united in marriage to a plebeian. The fact is, the murdered man was too good for them, both as to family connections and intelligence. He was, however, poor, and was at the time of the homicide, engaged as a servant in the Cronenbold family. After the commission of the offense, Cronenbold who had hitherto been somewhat childish for a boy of his age, exhibited what was thought to be insanity, and the skillful and adroit attorneys for him, Messrs. Johnson, Lodge & Gottschalk, con-

7. Ray, p. 131.

8. Ray, p. 130.

cluding to make this defense for him upon trial, had the five "Insane Physicians" of this city to visit him almost every day. These frequent visits of such men would make men of stronger minds than Cronenbold crazy. The attorneys and physicians found in the Circuit Attorney an easy prey to their theory, and he consented to appoint a commission, which consisted of these very physicians. They, of course, after a few hours' deliberation—long enough to write out the report—reported him insane. A bond having been given for his appearance, he was released. As there is neither law nor precedent for such proceedings, the bond is a nullity. The defendant will be sent to Europe to be treated, not as an insane man, but to break him off from a habit which young men indulge in, sometimes to the extent as to affect them more physically than mentally. Messrs. Johnson, Gottschalk & Lodge, managed the case well, and saved their client from a punishment which he justly merits—the gallows."

"Idiocy and the higher degrees of imbecility are congenital,"⁹ or so nearly so, that it can not be discerned at what time after birth they may have originated, in any particular case. "For all practical purposes we may define them as consisting in a general destitution of mental powers that were never possessed. The lower degrees, or those which approximate more closely to the average natural standard of mind, consist in arrested cerebral development, at different discernable stages after birth," and the degree of mental deficiency depends, of course, upon the periods at which cerebral development ceases to keep pace with the normal evolution of the organism, accordingly we may expect to find in the feeble-minded, various degrees of deficiency, either in those faculties which acquaint them with the qualities and ordinary relations of things, or in those which furnish them with the moral motives that regulate their conduct to their fellow men.

"In imbecility, the development of the moral and intellectual powers is arrested at an early period of existence. It differs from idiocy, in the circumstance, that while in the latter there is an almost utter destitution of everything

9. Ray, p. 320.

like reason, the subjects of the former, possess some intellectual capacity, though far less than is possessed by the great mass of mankind. Imbeciles can never attain that degree of knowledge which is common among people of their own rank and opportunities in life, though it is very certain that they are not insusceptible of the influences of education."¹⁰

Thus from the testimony of high authority, we may have arrested development, taking place from an impairment of the perceptive or reflective faculties, so as to produce only the slightest shade of stupidity, apparent only to the most intimate acquaintance, to that degree of mental deficiency which impresses the least skilled observer with the fact that its possessor is a fool.

Hoffbauer, acknowledging "the various and almost imperceptible shades of difference between one case of imbecility and another, has reduced its numberless gradations to five degrees, and those of stupidity to three. To those, as described and explained by him, he looks for the means of a consistent and rational application of legal principles that should regulate their civil and criminal relations."¹¹

To those practically familiar with the various degrees of mental deficiency as seen in our insane asylums and schools for the idiotic and feeble minded, the herculean labor of partitioning off into but eight classes, these cases, each of which constitutes a class almost *sui generis*, will be appreciated, and the remarkable success which has crowned Hoffbauer's attempt will be duly applauded. The division might have been much simplified by throwing the three degrees of stupidity into the classification of imbecility.

The natural condition of young Cronenbold's mind, both as a boy at school and after he had "grown to man's estate," is closely approximated in Hoffbauer's description of the first degree of imbecility, which we here transcribe, together with Hoffbauer's first degree of stupidity.

"In this degree of the affection, the individual can very well judge, respecting the objects to which he is daily

10. Ray, p. 85.

11. Ray, p. 88.

accustomed, and in familiarity with which he may be said to have grown up. In the pursuit of his daily concerns he often shows a minute exactness that appears to him a matter of absolute necessity. His memory is very limited, not that he loses absolutely the *remembrance* of things, but because he can not apply his recollections according to his wishes. He scrupulously observes whatever he thinks becoming in his station, because he fears to offend by neglecting it. When he gives himself up to avarice, there is observed in him rather an apprehension of losing, than a desire of accumulating. The nature of his daily occupations makes but small demand upon his intelligence. His infirmity is not so remarkable in ordinary society as to render it a subject of general observation. He is very subject to gusts of passion, which, nevertheless, are as easily appeased as they are excited."

In the first degree of stupidity, the individual is only incapable of deciding and judging, when it is necessary to weigh opposing motives. Then he feels his incapacity, and resorts to the intelligence of others.

While it is impossible to fully define any particular grade of mental deficiency, this is, perhaps, as close an approximation of Cronenbold's natural mental state as could be given. He brought with him but little knowledge of Europe, except the names of some of the cities he visited, and the hotels he stopped at. While in Europe, his attention was principally absorbed in finding lodgings and meals for the least money, the cheapest cigars, and the cheapest class of wine, though he was often swindled, without knowing it, by the waiters and the hackmen in making change.

As we have seen he "had learned to read, write and count, and made some progress in music." "Ray¹² would have described him in the following language."

"He could engage in certain occupations, and had managed in a manner to take care of his property and himself, though largely indebted to the advice and assistance of

12. Ray, p. 85.

others. He was one of those imbeciles, who talk but little, answer questions correctly, provided they are not without the circle of their customary habits and thoughts, and are not required to follow a conversation. He is particularly deficient in forethought, and in strong and durable affections, and 'labors under an uneasiness and restlessness of disposition, that unfits him for steady employment. They are thus easily induced by bad men to assist in the execution of their criminal enterprises.'" * * * *

"It is also worthy of notice, that the same physical imperfections, and a tendency to the same diseases, which accompany idiocy, are generally observed though in a less degree to accompany imbecility."*

There were other features about this case which the expert can appreciate, but can not well describe—peculiarities of expression, manner, movements and attitude which mark the case as one, both of imbecility and mental disease. These cases often present "outer proofs," of a morbid or congenitally deficient, "understanding which can hardly be depicted to the inexperienced," (Dr. Tyler.) "The power of the expert in this regard is not capable of being transferred to another mind, but must die with its possessor." * * "All profound and grave maladies have their specific physiognomy, more or less clear and capable of being described, some of them are fully clear and pathognomonic, like the odor of cancer, or the face of phthisis. Insanity has its own delicate characteristics of face, eye, manner, reasoning, feeling, which can be read by the expert, but which are not appreciable to the casual observer." (Dr. Bell.)

The following is the joint conclusion arrived at by the commission of experts.

To the Hon. Wilson Primm, Judge of the St. Louis Criminal Court:

We, the undersigned commission of medical experts appointed by your Honor to inquire into the mental condition of Benj. F. Cronenbold, respectfully report:

That we find the said Cronenbold in a condition of mind such as to incapacitate him for appreciating his situation as one accused of crime; that he is *non compos mentis*, and we

are of opinion that this condition will be a permanent one.

We severally append our reasons for arriving at this conclusion, which statements we desire to have considered a part of this report.

CHAS. W. STEVENS, Chairman,
C. H. HUGHES,
J. K. BAUDUY,
WM. B. HAZARD,
GEO. J. ENGLEMAN.

Subjoined, also, are the individual opinions, *in extenso*. of the members of the commission, revealing more of the history of this case than we have given. It was fortunate that the court accepted the joint opinion as to the prisoner's mental impairment without scrutinizing closely the irreconcilable discrepancies in the several opinions, opinions which, if subjected to rigid examination, by an acute prosecuting attorney, assisted by a skillful expert, might have led to the impression upon the minds of a jury, that the medical gentlemen, composing the commission, did not themselves comprehend the prisoner's real mental *status*, juries not being aware of the facility with which the abstract fact of mental unsoundness may be justly arrived at, while the greatest difficulty often attends the determination of the precise nature of the cerebral lesion, and the consequent form and degree of mental impairment.

The facts here noted suggest the propriety in all these cases, where it is practicable, of the experts agreeing to a joint report, setting forth the simple fact of mental unsoundness, with as little scientific amplification and specification as may be sufficient to subserve the ends of scientific truth and justice. For even learned judges, far above the average juryman in intelligence, are apt to think that men who profess to comprehend the complex subject of unsoundness of mind should be able, with entire unanimity, to determine the precise form and degree of mental impairment.

In the case of Cronenbold, though he appears in a state bordering upon fatuity or advanced dementia, there still remain the impress of the forced culture he received in his youth, and his memory, though it reproduces, in an auto-

matic manner, a limited number of facts and dates connected with his trip to Europe, and the homicide, is in fact, much impaired.

SEPARATE OPINIONS OF EXPERTS—DR. STEVENS' OPINION.

ST. LOUIS, MO.—October 1, 1874.

To the Hon. Wilson Primm, Judge of the St. Louis County Criminal Court:

SIR: Having had personal acquaintance with Benjamin F. Cronenbold, for a period of about five years, and having examined him many times during his confinement in jail, and having, with other members of your commission carefully examined reliable witnesses, several of whom have known him for a long time, I find but little difficulty in forming an opinion in regard to his present mental condition. Almost from childhood he has been regarded as weak in mind. This, however, became more apparent as he approached manhood; the condition then attracted the attention of his acquaintances and friends in general; and mental incapacity was manifested beyond question, as he attempted to transact business, or to take part in the amenities of social life. About five years since, his father mentioned the case to me, desiring me to make observation from time to time, with a view to determining, if possible, the precise nature of the deficiency or imperfection. At length, I was convinced that he was imbecile in mind, and, further, from some of his peculiarities and habits, I believed him in danger of falling into some form of insanity. For the last three years, he has been by regular gradations verging into dementia; the change since the homicide has been very rapid; at times he has had delusions.

I am, therefore, decidedly of the opinion that the prisoner is now laboring under the form of insanity, designated dementia, and that he does not and can not judge correctly or intelligently of his present surroundings or of his responsibilities.

Very Respectfully,

CHAS. W. STEVENS.

DR. ENGLEMAN'S OPINION.

Having attended the accused, Benjamin F. Cronenbold, professionally, upon his return from Europe in 1873,

and during the entire period of his confinement in the county jail, I have, by continued personal observation, been forced to the following conclusion.

1. That the said Benjamin F. Cronenbold, upon his return to the city in September, 1873, was in a state bordering upon mania, as proven by his irrational actions, insomnia and occasional delusions.

2. That for a few weeks after the homicide, in December, 1873, and January, 1874, his condition was one of absolute mental and physical prostration, torpor of mind, associated with a totally exhausted and debilitated state of the vital and nerve force.

3. That he has now fully recovered his physical powers, his memory being but slightly impaired. His reasoning faculties, however, are seriously affected, and very defective in intensity. His mind is in a more advanced state of imbecility, verging upon dementia. He is incompetent to arrive at any but the simplest conclusions, as evinced by incoherency of thought and language.

From these premises I must regard him to be totally unable to understand and appreciate his present situation, and unfit to be brought to trial. This opinion, based upon personal examination and observation, has been corroborated and strengthened by examination of the witnesses summoned before your commission.

Respectfully submitted,

GEO. J. ENGLEMAN.

DR. HAZARD'S OPINION.

YOUR HONOR:—The undersigned, commissioned by an order of Your Honor's court, of the date of 29th September, 1874, to examine into the mental condition of Benjamin F. Cronenbold, indicted for murder, hereby submits his individual report, supplementary to the joint report of the experts to which this is attached.

Having personally examined the accused on three occasions, twice in company with other experts, once alone; and having heard the sworn testimony of seven witnesses, the following facts have been ascertained to the satisfaction of the writer, and the succeeding conclusions drawn therefrom.

The aunt, grand-aunt and grandmother of the accused, all on the maternal side, were affected with some form of mental derangement.

As far back as it was possible to reach in the history of the accused, he was considered weak-minded, foolish or imbecile by his father, friends and acquaintances. This mental deficiency was so strongly marked that he was not considered capable of managing, or of being trusted to transact any kind of business, by those who knew him best.

He was sent to Europe to avoid what was considered an undesirable marriage, and while abroad, upon his return, and for many months thereafter, presented unmistakable symptoms of insanity, superadded to his former well-marked imbecility. This insanity was marked by alternating periods of mental exaltation and depression; the former evinced by extraordinary opinion of his own grandeur and dignity, and by persistent insomnia, restlessness and ideas of being engaged in business when he had none; the latter condition accompanied by suspicion, distrust of all those about him, and later, by well-defined delusions that he had been poisoned and that there was a conspiracy to again poison him. The fact of general mental alienation was shown conclusively by a total change in his personal habits as regarded dress, personal cleanliness and choice of food, this change occurring, not at any period of life when natural changes of development or decay occur, but following the unaccustomed excitement of travel, and the care and anxiety occasioned by absence from home and the charge of his own welfare, to which he had never before been accustomed. This form of intellectual insanity is termed *La folie circulaire*, or *La folie a double forme* by the French writers. It was during one of these periods of excitation that the homicide was committed. The period of depression which followed was of the most extreme character; so great was this depression that life itself seemed almost extinguished.

During the months of confinement in prison, the quietude of his daily life, the lack of all excitement, the care and attention of learned physicians, and a system of diet and exercise suited to his condition, his mental condition has

become nearly, if not quite, the same as that preceding his voyage to Europe. On simple subjects requiring no exercise of the reflective faculties, he can return very pertinent answers to direct questions. Where any except the least complex operations of the mind are concerned, he can answer only at random, or does not answer at all.

He never takes the initiative in conversation. His memory of simple matters seems to be good. He does not appear to have any real understanding of the enormity of his offense against human or divine law.

CONCLUSIONS.

1. He is *non compos mentis*. His brain, the organ of thought, is not developed to the usual standard. His condition before his voyage, and at the present time, is best described by the term "imbecility."

2. While in Europe, and for four or five months after his return, there was superadded to his normal or ordinary condition of imbecility, an acute attack of insanity.

3. At the present time he is imbecile to the extent above indicated, with the probability of a return of insanity of an extremely dangerous character if there is at any time presented any strong exciting cause.

4. He is now unfit for trial.

Respectfully submitted,

WM. B. HAZARD, M. D.

DR. J. K. BAUDUY'S OPINION.

After a most thorough examination of the previous history, and after a careful personal scrutiny of Benjamin Cronenbold, and after an analytical study of the evidence of many sworn witnesses, I am convinced of his imbecility for the following reasons, strong hereditary predisposition to insanity exists on the maternal side, of which the defendant's arrested mental development was the outcropping, exposing him to the worst of all tyrannies, which, in his case, is an organization mentally and morally defective. The utmost unanimity existed amongst witnesses, both relatives and others who were mere acquaintances, therefore entirely disinterested, that as far as investigation could pry into the

days of the prisoner's early boyhood the same mental weakness was evinced. In the opinion of the boy's father, who had endeavored to give him a liberal education, this misfortune and mortification had been realized and fully appreciated; and by all observers he was considered incapacitated from either taking care of himself, or transacting business of the simplest nature, with which a child of the average understanding could have been intrusted. Whilst in Europe, during the homeward journey, and immediately after his arrival, well-defined delusions of suspicion, distrust, fear of being poisoned, and an impression that conspiracies were being formed, of which he was the victim, manifested themselves and pointed to the fact that some more acute form of insanity had been superadded to his previous mental deficiency. The confirmation of this opinion, consists in a marked alteration of character, changing his habits, feelings, manners and dress. He evinced about this time the most singular, extraordinary behavior; his actions were discordant, his mind wandering, and all the intellectual manifestations thereof were more or less perverted.

Moods of great depression, alternating with those of excitement, and during the latter, ideas of grandeur and self-importance, were of peculiar significance, and must strike very forcibly, all conversant with psychological inquiry and study. Apathy and aversion to friends and relatives, constituted another link which makes the chain of evidence more complete, especially as all of these symptoms of mental aberration were exciting attention, long prior to the homicide.

About this time he was examined by Dr. Engleman, his family attendant, who found all the well-marked physical symptoms of insanity, obstinate insomnia, constipation, nervousness, etc.

It is worthy of remark in this connection, that two medical men, one of whom met him in Europe, considered him insane, and the other, his physician in St. Louis, had actually recommended that he should be sent to a lunatic asylum.

A feature of this case, to which I attach great impor-

tance, is that during a prison-life of many months, although watched night and day, and oftentimes when prisoner and his visitors were unaware of the presence of others, the same stupidity, stolidity, apathy and want of appreciation of his surroundings and condition pervaded his whole conduct. His replies were monosyllabic, his gaze vacant, laugh frequent, but always silly and meaningless. His friends and attorneys could not arouse him from this lethargy, and the latter have up to the present moment never been able to gain his confidence or obtain a solitary statement from his lips in connection with his case. When urged to talk, he would second their endeavors by utter incoherence and an idiotic laugh. All the salient features of this picture when assembled into a group, confirm our belief of the boy's fatuity, and give us every assurance that he is in a state bordering upon complete amentia.

DR. HUGHES' OPINION.

The conclusion of the undersigned, respecting the mental condition of Mr. Benjamin Cronenbold, is the result of frequent and careful personal examinations of the prisoner, during the months of June, July, August and September, preceding the receipt of your commission, and of one interview since.

The conclusion of imbecility was arrived at early last spring, by all the gentlemen composing the present commission, who then examined said Cronenbold, at the request of his attorneys.

Cranial measurement also seemed to strengthen the conclusion of imbecility. Whilst it is true that many weak-minded persons appear to be well formed in brain and body, it is also true that idiots and imbeciles usually have either abnormally small, large or deformed heads. By imbecility is meant arrested development of brain and consequent weakness of mind, more or less complete, according to the period at which development ceases. Almost every degree of imperfect development of brain and mind, may exist "down to actual incapacity to develop at all."

The degree of imbecility in this case, as I recognize it, from Cronenbold's life history, and personal observation,

may be found fully described in Hoffbauer's first degree, reproduced in Ray's *Jurisprudence of Insanity*, fourth edition, page 88, which, for sake of brevity, I here omit.

The history of Cronenbold's ancestry, especially his mother's mother, aunt and sister—they having all been at one time or another manifestly of unsound mind—would lead us to suspect that he possesses a "native constitution of nervous element, which is defective and unstable," even if his present mental condition were not sufficient to convince one of this fact. The natural weakness of Cronenbold's mind has been aggravated by disease, involving the brain and nervous system. He appears to have undergone a decided change, to be in a mental state different from his former natural weakness of mind, which I can characterize by no other term, than that of dementia. Here too, as in imbecility, "we meet with every degree of mental decay in different cases."

"Dementia is the natural termination of mental degeneration, whether going on in the individual or through generations." In this sense I use the term dementia, and consider that he is at present suffering from this diseased condition of the brain. That he had profound disease of the brain and nervous system, is established by the testimony of the Doctors Engleman after the homicide, and there are evidences of delusions before. The paralyzed condition of the bladder and bowels, the sleeplessness for so long a time, the marked prostration immediately after the killing, confining him for weeks to his bed, and requiring for him constant medical attention, and endangering his life in the estimation of his then attending physicians, the change in his natural habits, and the delusions, which, at times, possessed and dominated his weak mind, all confirm this conclusion.

The sworn testimony of all witnesses, without exception, who appeared before the commission, was confirmatory of the opinion here expressed. The present increased feebleness of mind from disease, in his case, may pass off and leave him in the imbecile state of mind natural to him, and from which he can never escape, or it may be more or less apparent

for the rest of his life. In the latter case, recurring attacks of acute insanity are apt to come on—should he recover from his present dementia—only to issue finally in complete and incurable dementia or total loss of all mind.

In any event, I consider him in such an unsound mental state as to be unable properly to appreciate the real nature of his present condition and situation, or to conduct his defence as a rational man, and that he should now receive, and probably for the rest of his life, the restraint and treatment of an asylum.

C. H. HUGHES.

After hearing the reports, the presiding judge obtained the written opinion of Circuit Attorney J. C. Normile, that the accused might be bailed for the purpose of sending him to an asylum, and fixed the bond at \$20,000. Cronenbold was sent to the Missouri State Lunatic Asylum, at Fulton, Mo., and the Superintendent is required to file a monthly report of the prisoner's mental condition, so that in the event of his recovering his mental health, he may still be tried on the indictment standing against him.¹³

Thus ends this important case. The ends of justice have been met, society is protected against an unsafe member, and humanity has not been outraged by a judicial murder of the mentally maimed, whom the hand of charity conducts to the hospital, rather than the gallows, or the jail.

Cronenbold was discharged from the asylum August 13th, 1892, unimproved and taken elsewhere for care, custody and treatment and there his life ended in fatuity or secondary dementia. The diagnosis at the time of his discharge from State Asylum Number One was chronic mania thus further showing that various views of mental aberration are not incompatible with a correct judgment that insanity exists.

An important legal feature in this case consisted in the fact that the uncle who passionately suggested the killing by saying at the table, "Benny, if I were you I would go and kill the ———," was never put on trial, though it was suggested by eminent legal opinion that he was legally liable as accessory before the fact or as *particeps criminis*; the

13. This is the end of the paper as originally published in Volume 31 of *The American Journal of Insanity* for April, 1875.

boy having gone immediately on receiving the advice and committed the murder. The legal point of interest especially is in the escape of the uncle from trial, having been secured by the fact that Cronenbold was never brought to final trial.

This case might be characterized "murder by suggestion." The suggestion was admitted by the suggestor, though not in the evidence and declared by the boy. The deed was done by him he said because he had been told to do it. The case is one of progressive mental failure engrafted upon imbecility—to inherent defect of brain is added the delusional psychic distortion of mental disease.

The medical points of interest center upon the unanimous medical verdict of imbecility, with somewhat varying views of the condition resulting from the engrafted mental disease. The medical expert opinions, though apparently divergent, were yet harmonious on the main matter for the law and this latter should be the aim of all medical evidence in matters of psychiatry before courts of justice.

This record, thirty-six years ago, established a precedent, at the suggestion of the writer, for the right ascertainment of the mental status of one charged with homicide in whom the extenuation of insanity is suspected and gives the victim of this grave affliction the chance his disease and the safety of the community demands.

Finally this case throws light on the evolution and transition of high degree imbecility into dementia præcox, though alienists were not, at the time this examination and report was made, using the term precocious dementia. Insanity in its various phases continues to be much the same in its varying expressions now as in the past. The Greeks used the term *paranoia* (*παρά*, "beside" and *vous*, "mind") for mental aberration and aberration of will and it meant insanity or near insanity, just as we regard it now, though they used it in a less restrictive and distinctive sense. Before our day it covered a form of what was before us included under the term *monomania*, that is: insanity in one or a limited number of directions and reasoning mania, (the *folie raisonnée* of the older French psychiatric clinicians.) Yet the

comprehensive term "insanity" includes all these phases of mental distortion or derangement.

I regard dementia præcox as a premature display of the dementia form of insanity, due to inherent psycho-cerebral degeneracy. It is aberration of mind engrafted on a lesser degree of imbecility than is idiocy. It is a dementia and delusional change of character engrafted on or evolved from a restricted or imbecile state of brain and associated mind.

This case might be classified by some, and not without some symptomatic justification, as manic depressive insanity for there was a maniacal impulse displayed in homicide and there was great psychic depression. We see to-day morbid, mental expression, much the same as our forebears in the past. We see the symptoms as our forbears saw them, but differently designate the symptom complexes of differing forms.

From my own clinical observation in psychiatry of many thousands of cases in a forty years' study in alienism, both in and out of hospital practice, it is my conviction that the basis of adolescent insanity or hebephrenia, or dementia præcox, as some regard it, though not the exciting cause of primary dementia and catatonia, is imbecility either congenitally or early acquired, requiring only subsequent great brain strain or brain exhausting circumstance to develop or display one or the other of these definite forms of imbecile insanity, *i. e.*, dementia præcox, hebephrenia, paranoia, primary dementia, etc.

It is not difficult to understand, too, how post-natal agencies which act on and impair the integrity of the early developing psychic neurone may cause imbecility and dementia, like alcohol for example, by its affinity for the fluids of the tissues and cells and impairs their growth and retards their development, causing atrophy and perversions of thought, emotion and will centers, just as it causes stunting in bodily growth of young animals.

The writer in justification of his right to discuss the subjects above offers an experience of five decades in the practice of medicine and surgery, four of which have been devoted to the study of psycho-pathology and the prac-

tice of psychiatry and neurology in hospital and without and in the teaching thereof. He believes, as Esquirol enjoined, that only close clinical relation with minds morbid justifies a claim of comprehending them aright. To be more explicit the author's relations to the study and teaching of psychiatry especially have been as follows:

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HYSTERIC MIMICRY OF DRAMATIC CRIMES.*

A Medico-Legal Study of the Sangster Case.

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HYSTERIA¹ is a cerebro-spinal instability which responds excessively in psychic, sensory, trophic, vaso-motor and motor directions to slight excitants whether exogenous or endogenous. It usually has a teratologic basis, but the instability may be produced in sound subjects by traumatism, insolation, electric shock, the essential fevers, syphilis, rheumatism and gout, the other great neuroses, as well as gonorrhea, tuberculosis, chronic malaria, pellagra, scorbutus, etc.

It seemingly occurs most frequently in women. It is, however, likewise present in men. The hysteric and the neurotic shade into each other, but in the neurotic the inhibitions are better preserved and primary "ego" explosions are less in evidence. Under Des Champs' term, neurotic women, are included both hysterics and neurotics. These Des Champs divides into three classes, cerebral, genital and neuropathic. In the hysteric intermixing generally occurs. In all, there is an absolute disequibration in sensibility and will power. Mobile humor exists in direct relation with facile impressionability to external influences or internal states. The nerves vibrate sentiments from within or without and all registered without proper relation. One fact chased by another is forgotten. Another produces a momentary hyperexcitation, which takes place of the truth, whence it is that falsehood is instinctive, but the patient protests her good faith if accused of the same. This lack of equilibrium leads to a decided modification of the mental faculties. Intellectual activity is over-excited, but in diverse degrees

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and variable ways, according to the particular tendencies adopted. Absorbed by a pre-occupation or controlled by an idea, they become indifferent to all else. Their ideas are abundant, and they rapidly pass from the idea to the act. Their vivid imagination, coupled with a bright intelligence, gives them a seducing aspect, but their judgment is singularly limited, attenuated or false. They judge from a non-personal standpoint excellently. They are quick at discovering the faults of others, even relatives, but faults rightly attributed to themselves are repudiated. Their memory is capricious. They forget their faults and their acts under impulse, albeit these may be consciously done. The cerebral type, a neurotic not a hysteric, is led by the intelligence. She has little or no coquetry; what coquetry there may be is the result of intention and temporary. There is an ethical sense, frankness and nobility in her ideas, disinterestedness and tact in her acts, and she is capable of friendship. Her tastes carry her to male pursuits, in which she succeeds. She becomes often what is called a "superior woman," but too often what is called a "misunderstood woman." She has but little guile. To the sensual type voluptuousness is the aim of life and the center of her acts and thoughts. She is well endowed with guile and extremely diplomatic. She is full of finesse, but not very delicate. Her lack of scruple often spoils her tact. She is ruseful, dissimulating and unconsciously mendacious. She despises friendship and needs watching. If circumstances permit she loses all delicacy, reserve and modesty. She is destitute of scruples. Her crimes are coolly remorseless. The neuro-pathic type is one to which the grasshopper is a burden. Her nerves are always on edge. She is a heroic invalid who displays the air of a martyr about trivialities.¹ Hysteric voluptuousness finds vent in perverted expressions; the method takes the place of the object aimed at. Sexual frigidity as to physical expression results in intense sexual preoccupation, which finds algolagnic satisfaction in pain caused others by pornographic language. The primary "ego" is peculiarly dominant here in an auto-erotism where the sexual emotion and desire are not only nearly absorbed

1. Alienist and Neurologist, 1903.

and lost in self-admiration, but this self-admiration finds intensification by the agony of others. Auto-erotism of "Narcissus type" appears in women in excessive use of the mirror. It exists in greater degree in primitive man, where male ornamentation is most marked. Civilization tends to increase this "Narcissus" factor in women, but has given it a more altruistic tinge through intensifying desire to be attractive to the male. In defective lacking potentialities of the secondary "ego" this tinge intensifies and intermingles with the primary "ego," whence the coquette, the harlot type and the auto-erotic pervert, destitute of homosexual or heterosexual tendencies. This last type occurs with peculiar frequency among the social "purists" who take such mixoscopic views of love. Zola¹ has depicted this type in Hyacinthe. It is lower than the invert, since it has no altruistic element whatever; the universe being concentrated in the individual himself. Many cases of the chastity of impotence are instances of this extreme auto-erotism. As Gueneau de Mussy pointed out over three decades ago, the hysteric manifests decided erotic tendencies, the coarseness of which often contrast with previous seeming purity of life and chastity of mind. Often under such conditions an advocate of "social purity" frequently writes to herself anonymous or pseudonymous letters, accusing herself in coarse terms of having been guilty of unnatural practices, and mystifies an entire community. All of a sudden, remarks Legrand du Saulle,² occur great divisions between families, who cease to visit each other, because they have received anonymous letters. In such community a hysteric exists well acquainted with family histories who, once entered on the way of the anonymous letters, experiences active algolagny in sowing discord everywhere.

That poisoned mail or express package trials should create a hysteric dream eventuating in an accusation and grand jury indictment need not surprise any one considering the hysteric plutocratic elements of which grand juries are made

1. *Alienist and Neurologist*, 1903.

2. *Journ. of Nervous and Ment. Diseases*, 1885.

up. In a case not pressed by the state's attorney some years back because of developments in an alienation of affections suit, the facts were as follows: A couple had been married some years and had a daughter aged six. The husband was a hard-working man. The wife was a nagger of the variety described in the *Comedy of Errors*.

She had hysteric hemi-anesthetic attacks sometimes accompanied by religious hallucinations. She likewise had very vivid erotico-religious dreams which often remained as delusions of memory. In one of these she saw her husband fondled by a wealthy aged woman of the city where the couple then lived. This produced hysteric belief of relations between the husband and the woman. Dream states are not rarely productive of such delusions of memory and have led to litigation as C. C. Hersmann³ has shown. In 1906, in Chicago, a declaration in a civil "dream suit" of a public school teacher,⁴ against a traveling salesman, was filed. The formal legal pleading made the first direct charge against him that he attacked the teacher. She asked \$10,000 damages. The strange set of allegations on which the suit is based, are chiefly hinted at in one paragraph of the declaration which states the said defendant fraudulently concealed from the knowledge of this plaintiff for a period of five years that he, the said defendant, was the person who had committed said attack upon the said plaintiff; and the plaintiff avers, that it has only been within the past five years that she discovered that the said defendant was the person who committed the said attack on August 31, 1904. So seemingly unreal was the incident which she says all but wrecked her life, that it seemed to her at the time a mere dream. She was in her own room. She seemed asleep. In countless hours since then she has racked her brain to recall any other mental evidence that she was not dozing at least. But the first impression—the shadowy, cobwebbed impression of the dream—is all she can recall.

But whether awake or asleep she saw, whether a real man of flesh and blood or an unsubstantial illusion, at any

3. *Alienist and Neurologist*, 1897.

4. *Benedict vs. Barrett*.

rate, a figure steal into her presence. The mysterious intruder crept toward her, took her by the throat at the instant she was preparing to scream, pressed a handkerchief to her lips—she remembers nothing more.

The next morning a sense of fright held her. She believed it was only a psychologic after-effect of her dream, which would pass away in the distraction of the day's occupations, and started to tell of the dream at the breakfast table of her boarding house, "I dreamed there was a man in my room last night—" she began. Instantly other conversation was hushed and all eyes were directed at her. She says she heard another boarder remark to the defendant who also sat at the table, "If she knew it were you, she would kill you." In her confusion, however, she said, anxiously: "Surely it must have been a dream," and the other boarders reassured her, saying that it couldn't have been a reality.

But the memory of the dream haunted her. The time came when she no longer could attend to her duties as a teacher properly and she resigned. At last so run down physically did she become that she consulted physicians and told them her remarkable story. The physicians she claims (albeit they deny it) assured her that there was evidence that her experience had been more than a vision. Then, she says, there leaped back into her mind the memory of that remark whispered in the defendant's ear at the breakfast table the morning after the dream. When her suspicions became conviction she retained an attorney and had him bring the suit. The judge directed the jury to acquit on the plaintiff resting.

Sleep mental states consist essentially of a suggestibility analogous to hypnotism together very often with a state closely allied to the results of hypnotic suggestion. The emotional state proceeding from suggestion is less complex and less intense than that proceeding from dreams. The relation of *pavor nocturnus* to later terrifying dreams is intimate, but persistences of this condition are not studied as such. This survives from primitive man who regarded his dreams as actual occurrences. Since terror of the unknown hangs over the savage adult as over the untrained child,

terror plays a large part in the psychology of dreams and sleep states. This led primitive man with his fetichic tendency to regard all occurrences from an anthropopathic point of view, to accept dreams as communications from spirits of like nature with himself. This belief evolved into the mythologic Morpheus who presided over sleep and whose dream communications, if true, passed out of his horn gate or, if untrue, passed through his ivory gate. Fetichic belief in dreams still dominates large masses of people theoretically under nineteenth century culture, as witness the profits from dream books.

In sleep states inhibition not only is disordered, but the judgment is perverted. High minded, honorable men do not scruple during sleep to commit most atrocious crimes or regard with complacency actions which in waking moments would fill them with horror. The secondary ego so slowly acquired by the race is through the removal of inhibitions by the circulatory conditions of sleep, distorted. The individual views everything from the egoistic standpoint of primitive man. For this reason dream judgments are so fallacious. As a rule in the ordinarily healthy individual, these judgments do not persist in waking moments, still under fatigue, emotional strain, general illness, neurasthenia, hysteric or defective childhood training, such judgments sometimes remain as delusional memories. Terror of the unknown which plays such havoc with the mentality of otherwise seemingly bright adults is largely due to an objective semblance given products of dream actions during the waking moments by such memory delusions. Occultism shown by adherents of Dowie, of the Eddycult, of the "spirit fruit" fanatics, spiritualists and clairvoyants, etc., often arises from delusional memories of sleep states regarded as experiences and judgments without reference to their source.

Sleep states have not medically received the attention their clinical and forensic aspects merit. Their pathology, physiology and psychology are destitute of the weird or occult which so attracts the unduly credulous and repels the crudely materialistic.⁵ The older clinicians attached

5. Dana, *Nervous Diseases*.

medical and forensic significance to dreams and sleep states which the later gross lesionists ignore. Dreams and sleep states include dreams proper, their survivals in waking consciousness, somnolentia, somnambulism and night terrors of children. The dream is a much more potent factor in waking consciousness than is usually assumed by the crude experimental psychologist.

The mental condition in sleep states is practically identical with that of fatigue exhaustion, grief and other mental shocks, neurasthenia, hypnnotism, epilepsy, insanity, etc. Disturbances of the co-ordinations constituting the "ego" occur.

Sense and organ impressions during sleep are rapidly transmitted into delusional illusions. This was shown by Maury,⁶ the physiologist, over fifty years back. Tickling his nose with a feather caused him to dream that a pitch-plaster, which he imagined to have been put upon his face, was violently withdrawn, giving him acute pain. A tweezers sounded close to his ear gave him a dream of the ringing of church bells, and, by suggestion, the sound of the tocsin with images of the political events of June, 1848. Eau de Cologne held to his nostrils made him dream of a perfumer's shop in Cairo, Egypt, in which he had formerly been. A few drops of water sprinkled on his brow suggested a vision of Italy, a sensation of great thirst, and a cooling draught of Orvieto. A red light carried before his closed eyes gave him a dream of storm and lightning, suggesting also recollections of a tempest. In a case reported by J. J. O'Dea,⁷ a physician slept in a cheese store over night.

A barrel of strong old American cheese had been recently unpacked. Its odor had strongly impregnated his room. In addition to this annoyance, just as he began to be very drowsy, he was disturbed by rats gnawing in the wall at bed's head. He at length fell asleep, and dreamed that he was in a savage country, on account of a crime condemned to imprisonment in a huge cheese. Here he suffered from the stifling stench. He had not long been a prisoner when

6. Du Sommeil.

7. Journal of Psychological Medicine, 1868.

a legion of rats attacked the cheese. At it they went, tearing away with their terrible teeth until they pierced its wall, and were gnawing at his flesh. In the midst of his agony he awoke to find it a dream, but at the same time was nauseated by cheese stench.

Mental training of the dreamer plays a large part in the dream. Hitschmann, who became blind at 3, but distinguished between light and darkness, states that he never dreams of seeing and does not share the fancy of poets that the spirit freed during sleep from bodily restraint can realize the gift of sight. The blind in general have weaned themselves from their deficiency and feel themselves in an accustomed natural condition. They have not that painful longing for light which is poetically ascribed to them. Naturally their dreams are compounded of the other sensations, especially the impressions of hearing. The blind dream much of voices by which the persons of their acquaintance are recognized, whereas the seeing often dream of faces and figures. Sometimes animals, especially dogs and birds, seem to the sightless to have human voices and to be gifted with speech. A blind man who traveled home once a year used to dream of the journey by rail. In this case the dreams were made up of rumbling wheels, whistle of the locomotive, feeling of fresh air through the open windows and the smell of food sold at the station. While the dream world of the blind is poor in sensory images, it is rich in abstract phenomena. The sleeper often feels himself a spectator as if he witnessed a theatre play. He seems to witness novels, dramas, or philosophical lectures. He never dreams of handling books for the blind or of using his wiring apparatus. Seeing people seldom dream of reading and scarcely ever of writing.

Sleep in criminals according to Despine is calm while Lombroso found it much disturbed by dreams. Dostoweffsky found that talking and gesticulating was frequent. Ferri found that the insane murderer slept after his deed like an epileptic while the born (?) murderer slept after his deed like a workman after his day's labor. Sancto de Sanctis examining into the sleep of 125 criminals, of these 29 often, 64 seldom

and 32 never dreamed. There were 24 women; of these 7 often, 14 seldom and 3 never dreamed. The neurotic subjects dreamed less often. In de Sanctis' opinion prison idleness, desire of liberty and perhaps nutritive states reinforce the mental activities of sleep. Among the worst criminals the greatest proportion of non-dreamers was found. The emotional dreams dealt with quarrels, falls from a height, persecutions, fearful visions, often mystical and frequently concerned with the sexual sphere. It is obvious that the physical state of the criminal rather than crime is potent.

The dreams concerning the crime which led to the imprisonment were emotional in the majority of men and unemotional in the majority of women. The blood-shedder during the nights following the deed and during imprisonment sleeps quiet and deeply unless special causes interfere. The habitual sleep of criminals resembles that of old epileptics and imbeciles.⁸

The impulses of neurasthenia and of allied psychopathic and neuropathic states may appear first during sleep and recur with peculiar persistence to form the basis of delusions or to dominate an unstable consciousness. It is possible to elicit delusions in the insane who are dissimulating by asking about dreams which sets up a train of thought leading them to expose delusion. And it is likewise possible thus to elicit obsessions of timid neurasthenics who dread lest these should show them insane and for that reason conceal them from their physicians. These last states and certain unsystematized delusions may be removed by securing restful, dreamless sleep. This prevents the recurrence of dream states tending to obtrusion upon wakeful consciousness and thereby to persistence. A homicidal impulse first appearing during a dream has recurred during consciousness and conditions being favorable, has been carried out. Cardiac, pulmonary and other circulatory disturbances moreover create during sleep suspicious states which do not always disappear upon awakening.

Morbid and pathologic dreams are divided by Macario

8. Havelock Ellis: *The Criminal*.

into three classes: The prodromic, or those which precede diseases; the symptomatic, or those which occur in the course of diseases, and the essential, or those which constitute the main features of disease. The first two are probably identical. Diseases are sometimes preceded by dreams which indicate, more or less exactly, an approaching morbid condition. Galen had a patient, who dreaming that his leg had become converted into stone, was soon afterward paralyzed in that member. Conrad Gasner dreamed that he was bitten in the left side by a venomous serpent. In a short time a severe carbuncle appeared on the identical spot and death ensued in five days. M. Teste dreamed three days before his death that he had an attack of apoplexy. Three days afterward he died suddenly of that disease. A young woman saw in a dream objects apparently confused and dim, as through a thin cloud, and was immediately thereafter attacked with amblyopia and threatened with loss of sight. Here hysteria cannot be excluded. A woman, under care of Macario, dreamed, at the menstrual flow, that she spoke to a man who could not answer her because he was dumb. On awakening, she discovered she had lost her voice. Hysterical possibilities are again suggested. Macario dreamed he had a severe pain in his throat. On awakening, he felt very well, but a few hours subsequently was attacked with severe tonsillitis. Arnold, of Villanuova, dreamed that a black cat bit him in the side. The next day a carbuncle appeared on the part bitten. Forbes Winslow⁹ cites several similar instances. Among the more recent neurologic discussers¹⁰ of dreams Sigmund Freud is given decided prominence by the "abnormal" psychologists. Freud goes far beyond the fundamental—and, as Ellis believes, undeniable—proposition that dream-imagery is largely symbolic. He holds that behind the symbolism of dreams there lies ultimately a wish; he believes, moreover, that this wish tends to be really of more or less sexual character, and, further, that it is tinged by elements that go back to the dreamer's infantile days. As Freud views the mechanism of dreams, it is far from exhibit-

9. *Obscure Diseases of the Brain.*

10. Cited by Havelock Ellis: *The World of Dreams.*

ing mere disordered mental activity, but is (much as he has also argued hysteria to be) the outcome of a desire, which is driven back by a kind of inhibition or censure (*i. e.*, that kind of moral check which is still more alert in the waking state) and is seeking new forms of expression. There is first in the dream the process of what Freud calls condensation (*Verdichtung*), a process which is that fusion of strange elements which must be recognized at the outset of every discussion of dreaming, but Freud maintains that in this fusion all the elements have a point in common and overlie one another like the pictures in a Galtonian composite photograph. Then there comes the process of displacement or transference (*Verschiebung*), a process by which the really central and emotional basis of the dream is concealed beneath trifles. Then there is the process of dramatization or transformation into a concrete situation of which the elements have a symbolic value. Thus, as Meader puts it, summarizing Freud, "behind the apparently insignificant events of the day utilized in the dream there is always an important idea or event hidden. We only dream of things that are worth while. What at first sight seems to be a trifle is a gray wall which hides a great palace. The significance of the dream is not so much held in the dream itself as in that substratum of it which has not passed the threshold and which analysis alone can bring to light." Freud's view is purely psychologic and ignores the physiologic and pathologic element demonstrated by Maury and others. In discussing the wish content, Freud ignores the degree of symbolism which local physical sensations rising into sleep mentally will produce. As I pointed out three years ago before the Chicago Academy of Medicine these play a large part in the symbolism of dreams even as to the so-called wish content of Freud.¹¹ Erythemas making their onset during sleep thus occasion startlingly vivid dreams with consequences persisting during waking consciousness. A migrainous neurotic man had a very vivid dream of having been in a field clad only in a pair of trousers with his back exposed to the blazing

11. *Alienist and Neurologist*, 1907.

sun. Severe sunburn resulted and he fell exhausted to awaken with a painful erythema covering his back. In another case, likewise in a lithemic neuropathic individual subject to ophthalmic migraine, a dream of having bent over a diphtheria patient who coughed into his mouth was followed by angio-neurotic edema of the fauces. A neuropathic woman who had been widowed for about a year and suffered from erethism at times had renal insufficiency. For this reason eggs were prohibited. One night after partaking rather freely of hard-boiled eggs she had a very vivid dream of having been repeatedly violated by male friends in a way that first caused enjoyment. No pain was felt until the last violation when a largely developed penis seemed to have torn her extremely. The dream persisted for some time after waking. The labia were the seat of an intense erythema and the vagina was covered with urticaria. This condition soon disappeared, but a persistent leucorrhoea followed which yielded finally to local treatment.

In the case of a married migrainous neuropath, whose husband had been away for months, a dream of having been violated by the devil whose very scaly organ caused considerable irritation, followed, however, by an intense enjoyment, but succeeded by a protracted generalized urticaria. The labia and vagina were, as in the preceding case, the seat of intense erythema and urticaria and the condition was likewise followed by leucorrhoea. These last cases indicate possible source of certain strongly emphasized hysteric accusations given with great detail and seeming vraisemblance. Such accusations repeatedly underlie charges of assault upon women which have roused the neighborhood and caused homicide by the unwritten law so much eulogized in the south.

C. B. Burr¹² remarks concerning this class of dreams that "a sexual dream may be so vivid as to make the subject believe she has had sexual congress." C. H. Hughes, in persons with every appearance of sanity, has known the erotic dreams of the day become the erotic delusions of the

12. *Alienist and Neurologist*, 1897.

day, the patient protesting violently the truth of the story. A clever highly neurotic woman wrote to Havelock Ellis:¹³ "For years I have been trying to stamp out my passionate nature, and was beginning to succeed when a strange thing happened to me last autumn. One night, as I lay in bed, I felt an influence so powerful that a man seemed present with me. I crimsoned with shame and wonder. I remember that I lay upon my back and marvelled when the spell had passed. The influence, I was assured, came from a priest whom I believed in and admired above everyone in the world. I had never dreamed of love in connection with him, because I always thought him so far above me. The influence has been upon me ever since—sometimes by day and nearly always by night; from it I generally go into a deep sleep which lasts until morning. I am always much refreshed when I awake. This influence has the best effect upon my life that anything has ever had as regards health and mind. It is the knowledge that I am loved fittingly that makes me so indifferent to my future. What worries me is that I sometimes wonder if I suffer from a nervous disorder merely."

Sancto de Sanctis, who has investigated the dreams of many classes, remarks on the frequently sexual character of dreams in hysterical women, and the repercussion of such dreams on the waking life of the following day, reports a typical case of hysterical erotic dreaming in an uneducated servant of 23, in whom such dreams occur usually a few days before the menstrual period; her dreams, especially if erotic, make an enormous impression on her; in the morning she is bad-tempered if they were unpleasant, while she feels lascivious and gives herself up to masturbation if she has had erotic dreams of men; she then has a feeling of pleasure throughout the day, and her sexual organs are bathed with moisture.

Under the influence of the dream about the aged woman, the wife in the case first cited instituted a damage suit for alienation of affections, the declaration in which was almost as weird as the Chicago one in the "dream suit."¹⁴ While under the dominance of the psychic factors of this suit the

13. *Psychology of Sex. Auto-erotism, Vol. 1.*

14. *People vs. Sangster.*

press exploited in a dramatic fashion poison by express sensations. Soon after a package was received at a Chicago express office in bad condition of whose receipt she had to be notified. When delivered it was partly broken. The package, according to her story told the grand jury, contained candy by which she and her daughter were made to vomit slightly and were constipated. The child had some rise of temperature. Both soon recovered under laxatives and no physician was called. The candy submitted to analysis was found mixed with arsenic which had been poured in through the broken box. On her charge, her husband was held to the grand jury. This, despite the gaps in the testimony, ignored its duty to determine on the assumption of guilt whether the evidence was sufficient to convict, and turned in an indictment. The case was repeatedly postponed by the state. The suit for alienation of affection resulted in a verdict of not guilty and the jury were with difficulty prevented from aiding a rider as to the mental state of the plaintiff. After this, the husband's attorney, R. J. Finn, insisted on a trial whereupon the State's attorney nolle prossed the case. Very similar were the facts in an Aurora, (Ill.) case. A woman divorced by her husband was a victim of the usual hysteric attempts at abduction and pseudonymous letters. Then a poisoned candy package was sent by express. The accusations previously illy defined became definite. The arrest of the accused exposed the hysteric nature of the accusations and the case was quietly dropped by the local police.

There are many interesting points in legal procedure involved in the laws of evidence as applied to these cases, the question of proof of mental states of witnesses for example. So as far as their reliability are concerned the hysterics must be considered under the influence of a delusional state, whether self-induced or not. It is therefore justifiable to show this element in the way it has been held that mental capacity, like other unknown qualities or conditions, may be shown by evidences and circumstances of three classes: 1. The person's outward conduct manifesting inward conditions and causing of conditions. 2. Pre-existing external

circumstances tending to produce special mental conditions.
3. Prior or subsequent existence at the time in question may be inferred.¹⁵

Every act of a person's life is relevant to the issue.¹⁶

In giving facts upon which the witness bases his opinion he should be permitted to state every fact which could be reasonably made the foundation of opinion as to the mental condition of the testator. Under this rule the party to the suit was properly permitted to testify as to the conduct and conversation of the testator and his frailties.¹⁷

Where in a criminal action the defense is insanity the defendant has the right to prove in this issue not only the illusions, insane acts and conduct, but also the facts which may account for such acts and appearances and which may reveal an adequate cause for the mental aberrations testified to.¹⁸

While the testimony in support of his claim that the testatrix was subject to insane delusions shows that she accused her neighbors of theft it was held that testimony was also admissible to show that said neighbors were reported to be honest people in order to show that the situation was such that a person of sound mind would not entertain such belief.¹⁹

Upon the question as to the general sanity of the devisor letters addressed to him in his life-time by a person since dead and found amongst his papers after his death is admissible in evidence if it be shown that the devisor answered such letters or did some act in relation to them.²⁰

Where it is admissible to prove insane delusions it is also admissible to prove facts upon which the delusions are based as tending to establish insane delusions and the good faith of the accusations.²¹

Where there was evidence tending to show that defendant

15. Wegmore on Evidence. Vol. 1, Sec. 227.

16. Wegmore on Ev. Vol. 1, Sec. 228.

17. Larbach vs. Jones, 20 Kansas, 497.

18. Peo. vs. Wood. 126 N. Y. 249.

19. Titus vs. Gage, 70 Vt. 16.

20. Latham vs. Wright, 6 Neville, Manning's Report, (Eng.) 132.

21. Spivey vs. State 77 S. W. Rept. 444.

was laboring under insane delusions based upon public rumor and it was claimed that no such public rumor existed it was held to be admissible to show that such public rumor did not exist and that there was no basis for such an opinion.²²

Where the evidence of the acts, conduct and declaration of the accused at various periods of his life are introduced in his defense to prove his insanity at the time of the committing of the crime, the prosecution in rebuttal is not limited to particular acts, conduct or declarations so put in evidence in behalf of the prisoner, but may offer evidence of other acts, conduct and declaration of the accused to show that he was sane within the same period.²³

The lay witness may give his opinion of the sanity of the person whose sanity is in issue after first stating the facts upon which his opinion is based.²⁴

In regard to the more difficult problem of insanity in a witness, it has been held :

Insanity of a witness may be proof for the purpose of impeachment.²⁵

Adjudged cases upon this subject are few. But the doctrine seems to be that the condition of mind which is capable of appreciating the truth is not a ground of excuse of a witness, but must go to his credibility and every act indicative of insanity is admissible and must be submitted to the jury.

In the case of *Pease vs. Burrows*, (86 Me. 153) it was held that it was even proper to cross-examine a witness upon such acts as indicated insanity.

The question whether witness sane at the time he testified was insane at the time of the transaction in regard to which he testified goes to the credibility of his testimony and not to his competency and is therefore a matter of evidence for the jury.²⁶

In the case of *Territory vs. Padilla*, (8 N. M. 511,) it was held, that where the court failed to instruct the jury upon special request as to the sanity or insanity of a witness so

22. *State vs. Jones*, 50 N. H. 382.

23. *U. S. vs. Holmes*, 1 Clifford C. C. Rept. 98.

24. *Roe vs. Taylor*, 45 Ill. 485. *C. U. T. Co. vs. Lawrence* 2, 10, Ill.

25. *Wegmore on Ev.* Vol. 2, Sec. 931.

26. *Halcomb vs. Halcomb*, 28 Conn. 177.

that the jury could consider same in weighing the credibility and weight to be given the testimony even though the testimony in the attack made was very slight, it was held error. And it is further held that if there was any testimony in that regard the court should have instructed on the subject if specially requested.

In the case of *City of Guthrie vs. Schaffer*, (Okla. 54, Pacific, 699,) it was held that if there is sufficient intelligence to understand the nature of an oath and if he can correctly relate the facts and circumstances he should be permitted to testify and the court gave the following instruction:

"Testimony is before you tending to show that since the time of plaintiff's injury her mind is somewhat impaired and you are instructed that in determining the weight to be given her testimony you should take into consideration testimony tending to show mental condition of plaintiff at this time and from such testimony together with her own statements and evidence as to how the accident occurred give her testimony such weight as in your judgment the same is entitled to."

Evidence that a witness who has been examined was of unbalanced mind and memory is admissible to attack the credibility of his testimony although it is not offered as an objection to his competency before he was sworn.

It is not proper to reject evidence although merely because the terms in which it was offered relate indefinitely to some time preceding the trial.²⁷

It is held error to exclude evidence of acts and conduct bearing upon the mental condition of the witness prior to the date of the alleged assault.²⁸

In the prosecution for obtaining a deed by false pretenses evidence of the prosecutor's mental condition subsequent to signing and that his condition was the same prior thereto and continued unchanged up to the time of the trial was admissible where the prosecutor was a witness to aid the jury in understanding his strength of mind when the deed was signed and to determine his credibility.²⁹

27. *Rivera vs. Ghio*, 3 E. D. Smith Rept. (N. Y.) 264.

28. *State vs. Kelly*, 57 N. H. 549. xxxx

29. *State vs. Moatz*, 108 Ia. 14.

A person afflicted with insanity is admissible as a witness if it appears to the court upon examination that he has sufficient understanding to appreciate the obligations of an oath and to be capable of giving a correct account of the matters which he has seen or heard with reference to the account at issue and his credibility is a fact to be determined by the jury.³⁰

Insanity unless amounting to entire extinction of reason is not now considered grounds for absolute exclusion from the witness box. It is, however, admissible in order to affect his credit to prove that the witness was subject to insane delusions³¹

In the case of *Halcomb vs. Halcomb*, the court said, "The witness apparently understands and apprehends the obligation of an oath and appears desirous of telling the truth."

On post hoc reasoning based on the credibility of her story it is inferred that her mind imagines fanciful occurrences as real. The court cannot say that her illusions rendered her testimony altogether unreliable as some occurrences were within her ocular vision. On the other hand, while her illusions in some degree at least weakened somewhat, it did not utterly destroy her testimony, but raised doubts as to his actuality and reliability and certainly the cause of such conditions should be considered somewhere and if not sufficient to be acted on by the court in excluding her testimony altogether must be considered by the jury or not at all.³²

The question of responsibility for actions due to dream states would seem clear under either the right and wrong test, the irresistible impulse of Illinois, Alabama, Wisconsin and New Hampshire or the impairment of the will test of continental European codes. English judges from their illegal tendency to legislate have made as much of a muddle of this as they have of all other medico-legal questions. In

30. *D. C. vs. Armes*, 107 U. S. 519. *Mayor of Sainesville, vs. Caldwell*, 81. Ga. 78—*Walker vs. State*, 97 Ala. 85.

31. *Wharton on Criminal*. Ev. 9th Ed. Sec. 370.

32. *Contra. State vs. Hayward*, 62 Minn. 474 as to the proposition of the insanity of a witness.

the case of Regina vs. Griggs³³ this was excellently shown as well as the tendency of judges to disagreement, a tendency compared to which, as H. N. Moyer has said, disagreements of physicians are a harmonic symphony. A woman was arraigned before a police magistrate named Broughton. A police sergeant testified that at 1 A. M. he heard a female voice exclaim, "Oh, my children! save my children!" He went to the house, No. 71, from whence the cries proceeded and the landlord opened the door. He went upstairs, accompanied by two other constables, and while making way to the first floor heard the smashing of glass. He knocked at the door, was fastened, and said, "Open it, the police are here." The prisoner, who was in her night dress, kept on exclaiming, "Save my children!" and at length, after stumbling over something, let the officers in. The room was in total darkness and only by the aid of lanterns could they distinguish anything in the room. On the bed was a child five years old and another three years of age by her side. Everything in the place was in confusion. She kept crying out, "Where's my baby? Have they caught it? I must have thrown it out of the window." The baby must have been thrown out as the officer was going upstairs, for before getting into the room he heard something fall. He left a constable in charge of the prisoner, and later ascertained that the child which had been thrown from the window had been taken to the infirmary. The mother said she had been dreaming that her little boy had said that the house was on fire and that what she had done was with the view of preventing her children from being burnt to death. He had no doubt that if he and the other constable had not gone to the room all three of the children would have been thrown out into the street. The cry of "Oh, save my children!" continued nearly five minutes. The injured infant was eighteen months old. From the excited state in which the prisoner was he did not at the time take her into custody. The surgeon had said it was a species of nightmare which the prisoner was laboring under when the act was committed.

33. Literature and Curiousities of Dreams, Seafeld, Vol. II, p. 332.

The window had not been thrown up. The child was thrust through a pane of glass, the fragments of which fell into the street. The prisoner had always evinced a kindly feeling towards her children and her attorney hoped that the magistrate would allow the husband to have her under his care during the temporary remand which, of course, would take place. The dream under which the act was committed showed that she had not at the time any consciousness of what she was doing.

Mr. Broughton considered that it would be a most dangerous doctrine to lay down to say, that because a person was dreaming whilst committing an offense, that they were not culpable for their acts. A woman, on these grounds, might get up in the middle of the night and cut her husband's throat, and, when brought up for the offense, turn round and say that she had done the act whilst under the influence of a dream. He (the worthy magistrate) considered the case to be one of a serious nature, and in the event of death ensuing an inquest would be held on the body. He could not think of taking bail in so serious a case, but would remand the prisoner during her present excited state she would be taken care of in the Infirmary. The Recorder, in his address to the grand jury, took more rational view of the case. "If the prisoner," said the Recorder, "really did the act under the idea that it was the best mode of insuring the safety of the child, it appeared to him that under such circumstances it would be a question whether the grand jury would be justified in coming to the conclusion that the accused was guilty of a criminal act. "The grand jury thereupon threw out the bill."

While the hysteric is clearly responsible for auto-suggested acts which she could control at the outset, in later state responsibility is dubious. Her estate would be liable for the results of her false accusations.

SURVIVALS OF FOLK-LORE.

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TWO theories have been advanced to account for the spread of Eddyism, Dowieism, faith and mental healing and allied psychologic vagaries which marked the closing 19th century. One is that they are reactions against the materialism of the age and of the medical profession. The other, advocated in terse, trenchant terms by the Popular Science Monthly, is that they are recrudescences of superstition. Superstition, a term applied to the half brother of faith is rather antiquated. The term "folk-lore" is far preferable as implying a psychologic evolution rather than an essentially supernatural state of mind.

Survivals of folklore appear, to adopt Gomme's classification, in active normal forms in existing primitive races; in active and hence degenerate types among races high in culture; in arrested types expressed first in partly atrophied folk-lore, and its later evolution into science; secondly, in folk-lore atrophied into mere symbolism, or later evolved from this into science; thirdly, in science as evolved from the arrested type. The science of one age seems folk-lore to the next, because it retains folk-lore atrophies which later science has lost.

Primitive man is not a materialist nor yet in the modern sense a spiritualist, although the mentality of the spiritualist of to-day closely approximates that of primitive man.

Primitive man cannot avoid considering things as endowed with the inner properties discovered in himself,

since he has no critical sense.¹ For him every object lives, wills, is kindly or unkindly disposed. Thus everything inspires him with suspicion, so that he scarce ventures to touch even the plant which affords him nourishment without propitiatory rites.² As man can ascribe to objects such notions and passions only as he has himself, primitive man attributes to his fetich his own desires, magnified to the highest degree, his hunger, his thirst, his love, his hate, his caprice and his rage. The object, like the child's doll, continues to be in the primitive mind that which it is in the external form. The stone remains a stone, the river a river. Water itself, in its proper form and with its native properties, is invested with anthropopathic characteristics.

The same apprehension of things occurs in children. The little girl who, in perfect seriousness regards the doll as a playmate, who strips and clothes it, feeds and chastises it, puts it to bed and hushes it to sleep, calls it by a personal name, etc., never imagines that all her care is bestowed upon a lifeless thing. For her the doll is possessed of a human life bestowed upon it by herself. The fetichic conception here described establishes a mysterious "religious" state which necessitates restriction and safeguards or taboos.³ Men and women at marriage, women during menstruation, pregnancy and childbirth, infants, boys and girls at puberty, not to mention other critical conditions, are in this mysterious "religious" state. They are dangerous and are themselves in danger. The person, as Frazer⁴ has lucidly remarked, charged with this electric force, which is both dangerous and beneficent, must be insulated by various taboos.

Primitive taboo still exists in all its pristine strength, but split up into religious, moral and social habits, each distinguished by different terminology. The ease with which the Polynesian term taboo passed into modern languages illustrates, as Crawley forcibly remarks, the continuity of culture and the identity of elementary human ideas. From the anthropopathic conception of primitive man arises his

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1. Kiernan: *Alienist and Neurologist*, 1905. 1 F. Schultze: *Fetichism*.
 2. Bastian: *Beitr z. vergleich Psychologie*.
 3. Crawley: *Mystic Rose*.
 4. *Golden Bough*.

belief in the omnipresence of "spirits," with like caprices and passions to himself. Supernatural personification does not cover all of primitive spiritualism. These dangers are still undifferentiated and combined in one genus in which there is no distinction between natural and supernatural, real and ideal, nor between persons and other existences. These "spirits" are really material, though unseen; many are simply "influences," states of matter, impersonal forces. The atmosphere is thus charged with "bacteria" of invisible mischief, or with "spiritual" electricity. Man needs to walk warily, since at any moment he may be endangered by his hylo-idealistic force.

These "influences" produce states of "religious" peril. This primitive conception of danger leads to the precautions of "religious" type characteristic of early ritual. It appears in two main forms: the predication of evil and the imposition of taboo. Primitive man, indeed, mankind in general, are very secretive concerning their functional life.

Evil "spirits" are not always clearly distinguished from transmissible properties of matter. When President McCosh ascribed the typhoid epidemic at Princeton University, a quarter of a century ago, to a "mysterious dispensation of Providence," he adopted this conception of primitive man.

General ideas concerning human relations are the medium through which all taboo works. These conceptions center upon contact. Ideas of contact are at the root of conceptions of human relations at any stage of culture. Contact is the one universal test, as it is the most elementary form, of mutual relations. Desire or willingness for physical contact is an animal emotion more or less subconscious, characteristic of similarity and harmony; friendship or love is absent. Primitive physics, no less than modern, recognizes that contact is a modified form of a blow. Avoidance of contact is the most conspicuous phenomenon of taboo when its dangerous character is dominant.

This material transmissibility renders contact of such importance. Transmission of properties, whether of nature, man or "spirits," is behind avoidance or desire for contact. Every part of the body, according to primitive science, is

impregnated by man's properties. The parts especially so considered are those held to have special connection with life and soul, chiefly important organs and centers.

Biologically the sexual impulse is a development from the nutritive. The primary close connection of the two functions continued in thought, subconscious and physiologic, and appears sometimes above the threshold of consciousness. If contact of the two sexes be always potentially dangerous through fear of contagion of properties, this danger is in primitive thought multiplied and enhanced when the contact is most intimate. The supreme biologic importance of the nutritive impulse, of which the sexual is an extension or complement, and the delicate mechanism of the reproductive organs, have determined in the usual ratio man's psychologic attitude toward the function. Periodicity has made coitus less ordinary psychologically and more shrouded in secrecy than hunger. It is hence more surrounded by fear and mystery. The instinct for performing important functions in secret arises from anxiety for unimpeded performance and from fear of interruption.

Sexual taboos originated in sex differentiation, occupation differences and sex solidarity. This biologic phase is permeated by a religious element involved in human relations regulated by contact. The central motor element is the dread of transmission of properties of one sex to another. Woman, being in primitive biology the great spirit attractor, has the most mystic functions. The origin of the occult powers attributed to women, according to Durkheim,⁵ is to be found in primitive ideas concerning blood. Blood is generally taboo and taboos everything which comes in contact with it. Woman is periodically the theatre of bloody manifestations, and therefore tends to be chronically taboo for other members of the community. A more or less conscious anxiety, a certain religious fear, cannot fail to enter into all relations of her companions with her, and that is why all such relations are reduced to a minimum. While the primitive emotion is mainly one of veneration, there is an element of fear in such veneration, and what men fear is

to some degree odious to them. Woman at menstruation has, according to primitive theology, intercourse with the spiritual world, and is more or less a potential witch or properly a *vala*, for, as Havelock Ellis⁶ points out, she is not accurately described in the couplet:

Oh menstruating woman, thou'rt a fiend
From which all nature should be closely screened.

Like all supernatural elements in primitive theology, she has the capricious goodness of primitive man himself.

For these reasons relations of man and woman are always potentially dangerous and later sinful. Intercourse (commensal or sexual) is particularly dangerous from its intimacy. Of the commensal influence, traces are discernible in the lower and middle class German women who serve the men first, afterward eating themselves.

Sexual relations even when lawful are dangerous. Such relations are so intimate that they are incompatible with "repulsion" between the sexes, since the barrier between them does not permit of close union. As the organs specially concerned are the source of the dreaded manifestations, there is likewise potential danger in living together.

In primitive thought all intercourse has a note of material danger which later splits up into ideas of sin. This results from the breaking of personal and sex taboos through intercourse. Material results of taboo violation naturally evolve into violation of ethics. The *malum prohibitum* thus becomes the *malum in se*. Even ceremonial taboo breaking does not always remove these material dangers and their ethics involvements. Where sexual taboo is fully developed, the life of husband and wife is a sort of divorce a *mensa a thoro* and the life of man and woman is that of two divided castes.

Modern Europeans still fear that quasi-spiritual agencies create marital incapacity and infidelity.⁷ Charms against these are still bought in drug stores in Continental European districts of American cities.

The principle of inoculation is expressed also by either

6. Psychology of Sex, vol. ii.

7. Mystic Rose.

or both of the pair wearing each other's dress. Inoculation and assimilation is thus effected by wearing the clothes of the loved yet dreaded person. It survives in the ring exchange of the German marriage ceremony, which has become mere symbolism. In the English-speaking where but one ring is given the full symbolism of this is stated in the ceremony. The woman's superiority of the Anglo-Celtic race here occurs. The many cases where a lover wears a bracelet or article of clothing of his mistress are parallels of this. The love fetich is an atrophied survival. In the chivalric love of the middle ages this fetichism appears. The "favors" given by the fair one were both "tokens of remembrances," and sexual excitants of satisfaction. Sir Walter Scott significantly says: In the attacks made by Buckingham on the Isle of Rhea, "favors" were found upon the corpse of many French soldiers, but for the manner in which they were disposed of we are compelled to refer to Howell and Wilson.⁸

Mutual "inoculation" renders the union innocuous on either side and completes ideas of contact and is a union. Each gives to the other and receives from the other a part. This, on the contact principle may be, as in love-charms, a lock of hair, a piece of clothing, food that has been touched or not, blood or the like. This affects union by so assimilating one to the other, as to produce identity of substance. When the act is done simultaneously, its sacramental character is intensified. The union thus effected has a binding force. Each part having given a part into the other's keeping is thereby bound. Having received part of the other, he or she has thereby a hold over the other. The act is the materialized expression of a desire for union, identical in principle with physical contact, especially with contact in love. This sums up the whole cycle of conceptions as to human relations latent in man. The ceremony of joining hands and the like is common. Here mere contact fulfills the union. It is a ceremonial pre-representation of marriage union, assisting that union by making it safe and by previously making it objective.

Double inoculation by means of dress, each wearing the

8. Essays on Chivalry.

dress of the other sex, survives in European folk-custom. The bride and groom exchange head-dresses and the like. After betrothal the Ainu boy and girl wear each other's clothes. This method of union is common in love-practices. A modern English 'Arry and 'Arriet exchange hats on Bank Holiday from a principle inherent in human consciousness. The commonest of marriage ceremonies is eating and drinking together. This mutual inoculation by food is the strongest of ties and breaks the most important of sexual taboos, that against eating together, producing identity of substance. Thereby it introduces the mutual responsibility resulting from eating what is part of one's self to eat. Each has the other in pledge, and each is in pawn to the other. Any ill feeling or sin later will produce bad results between the pair. The closest union is produced with the closest of responsibilities.

Spirit to primitive man has the identical appetites, desires and needs that living man has, whence burial food, weapons, killed slaves and wives with a corpse. As matter has the like nature with man and as man to the primitive man is the highest form in the universe, a struggle for reincarnated existence occurs between the spirits, not incarnated in man.

These struggles for reincarnated existence between spirits, as Dr. Harriet Alexander calls them, play a part in a primitive occultism which is the foundation of the malicious mesmerism or spiritual creativeness parthenogenesis of the Eddyist cult.

An Australian tribe according to Frazer¹⁰ has, for example, no notion that mankind is propagated by union of the sexes. Indeed, when the idea is suggested to its members they steadfastly reject it. Their theory of the continuation of the species is that in certain far-off times (to which they give the name of Alcheringa) their ancestors roamed about in bands, each consisting of members of the same totem group. When they died their spirits went into spiritual storehouses in the earth, the external mark of which was a stone or tree.

9. *Medicine*, 1903.

10. *Fortnightly*, 1899.

Such spots are scattered all over the country. Ancestral spirits who haunt them are ever waiting for a favorable opportunity to be born again into the world. When one of them sees his chance he pounces out on a passing girl or woman and enters into her. Then she conceives, and in due times gives birth to a child, who is firmly believed to be a reincarnation of the spirit that darted into the mother from the rock or tree. It matters not whether a woman be young or old, matron or maid—all are alike liable to be thus impregnated by the spirit. It has been shrewdly observed by the natives that the spirits on the whole exhibit a preference for such as are young and fat. Accordingly, when a plump damsel who shrinks from the burden of maternity is obliged to pass one of the spots where the disembodied spirits are supposed to lurk, she disguises herself as a withered old hag and hobbles bent up double, leaning on a stick, wrinkling her smooth young face, and mumbling in a cracked, wheezy voice, "Don't come to me, I am an old woman."

In the opinion of these savages every conception is therefore an "immaculate" one brought about by the entrance into the mother of a spirit, apart from any contact with the other sex.

Another phase of the same belief is found in Annam, where the spirits of children still-born or dying in infancy are held in great fear. These spirits, called *Can Ranh*¹¹ or *Con Lon* (from *lon*, "to enter into life"), are ever seeking to incorporate themselves in the bodies of others, though after so doing they are incapable of life. Moreover, their names are not mentioned in the presence of women, for it is feared that they might take to these, and a newly-married woman is in like manner afraid to take anything from, or to wear any of the clothing of a woman who has had such a child.

An atrophic phase of this folk-lore makes its appearance in Latin Medical Jurisprudence. Under the influence of this even in English-speaking countries, the jury of matrons was called as experts in pregnancy and infanticide cases. Many of the absurdities of so-called common law in this particular are due to judicial legislation in the wierd *lucubra-*

11. Chamberlain: *Child in Folklore and Folkthought*.

tions of the matrons. In the Latin countries they had much greater scope as witness a famous French decision supporting "spirit" pregnancy. "Considering," remarks the forewoman of this jury, "the evidence showing that it is more than four years since the said Lord of Aiguemente has carnally known the said lady, declaring that although she has not carnally known her husband yet having imagined in a dream the person and contact of the said Lord of Aiguemente, she experienced the same sensation of conception and pregnancy that she might have received in his presence, and affirming that since the absence of her husband for four years, she has never had intercourse with any man, and that she has nevertheless conceived and borne the said Emanuel, which she believes to have come about by the forces of her imagination. Considering the depositions of the ladies of Albriche, of Pontriel, of Oegeval, etc., affirming that such an accident may happen to women; that such things have happened to themselves, and that they have conceived children of which they have been happily delivered, which resulted from certain imaginary intercourse with their absent husbands and not from copulation; considering the attestation of the midwives and of the physicians, the court decrees that the said Emanuel is and shall be declared the legitimate and true heir of the aforesaid Lord of Aiguemente, and charges the appellant to hold the said Lady of Auvermont as his wife in estate and home."

In an 1894 Italian case carried to the highest court of appeal a marchioness claimed to have been impregnated by the astral body of her husband absent for four years before her delivery in Abyssinia. The connecting link by way of photographic maternal impression between these survivals of primitive spirit parthenogenesis and the pregnancy by spiritual creativeness and malicious mesmerism of the Eddys is clear and decided. The dominant influences of Eddyism are two, the "science falsely so called," plagiarized as has been shown from Quimby and the malicious mesmerism destitute of the animal magnetism of Mesmer, an unadulterated demonology. Neither the discovery of witchcraft of Dr. Reginald Scot of the 16th century nor Dr. S. Wierns

and Harsnett's¹¹ exposures in the 17th century secured liberation of the human mind from primitive witchcraft notions. In the 17th century Dr. Thomas Browne, the author of *Religio Medici*, is found denouncing deniers of witchcraft as atheist and condemning by his "expert" evidence an unfortunate old woman to death by fire on the accusation of hysteric girls and children. He admitted the alleged "fits" were natural, but in his prosecution zeal testified they were due to the malice of the witch co-operating with the devil.

The last witch judiciously burned died in Bavaria in 1809. The belief survived, crossed the Atlantic and is dominant in Pennsylvania, West Virginia, North Carolina, Georgia and Florida to-day among Americans. Pittsburg preserves its reputation by paying thousands to "witch doctors." In 1893 witch doctor Amend was in receipt of \$15,000 a year. "Dr." Otto Nagerman, of Reading, Pa., is the "witch" doctor of that vicinity. When hysteric females and male sexual hypochondriacs fail to respond to medication, he is consulted and his decision sometimes leads to local persecutions of the suspected witch. He lately examined a case of hysterical insanity and found evidence of witchcraft. The alleged "witch" has been driven insane by the resultant persecution and lynchlaw of her neighbor.

A Kansas City negro hysteric passed from the care of physicians to the hands of a local "witch doctor." The female "cured" the girl by "removal" of scorpions, snakes, toads, etc., from her body. The aesthetic sense of the hysteric was offended at the supposition of such "ugly" things being in her beautiful boy, and she refused to pay the fee, whereupon suit was brought and "testimony" taken, inclusive of production of the "removed" reptiles, despite the fact that the complainant had no legal standing under the clauses of the Missouri medical practice act. The "scorpions, snakes, etc.," were survivals of the phase of demonology which developed into the germ theory in the 17th century; these the "animalcula" of Cotton Mather.

Hecate's victims (the spirit before described) act, Reclus¹² points out, as vampires on the living and suck their

12. Primitive Folk.

viscera and vital organs. They transform themselves into spiders visible to the angakok or medicine man. These exhale their poisonous breath into the intestines and thrust therein long claws, black and hooked. The angakok, being a well-intentioned sorcerer, defends his people from the multitudinous inroads of the demons that take the form of cancer, rheumatism, paralysis and above all, cutaneous diseases, which civilized man attributes to uncleanness. When diagnosis puzzles an angakok, he has recourse to a truly ingenious proceeding. He fastens to the invalid's head a string, the other end of which is attached to a stick; this he raises, feels, balances on his hand, and turns in every direction. Various operations follow, having for their object the forcible removal of the spider from the luckless wretch whose flesh it devours. He will cleanse and set to right as much as he is able, whence his name, "Mender of souls." A wicked witch, present though invisible, can undo the efforts of the conjurer, and even communicate to him the disease, rendering him the victim of his devotion. Black magic can display more power than white magic. Then seeing the case to be desperate the honest angakok summons, if possible, one or more brethren, and the physicians of souls strive in concert to comfort the dying man. With a solemn voice they extol the felicities of Paradise, chanting softly a farewell canticle, which they accompany lightly upon the drum.

These elements of occultism persisted particularly in the so-called practical middle classes who for a time, controlled by the cultured, rode into dominance with the financial revolutions of the 19th century. The coarse spiritualism of the Fox sisters mobilized this class and mobilization gave it control of the press and pot-boiling literateurs. The shrewdly kindly, critical spirit of Sir Walter Scott's *Demonology* and *Witchcraft* gave way to the coarse occultism of Howell's "Questionable Shapes," Hamlin Garland's "Tyranny of the Dark," and the peculiarly nauseous spiritualism of Henry James' "Turn of the Screw," where the spirit control is a dead sexual pervert. To these morbidities Bulwer's "Strange Story" and "Zanoni" furnish connecting links

with the Rosicrucians. In pure bourgeois occult conventionality Besant's "The World Went Very Well Then" and "St. Katherine's by the Tower" link the 19th century with paleolithic man spells gibber through both books.

It must be admitted there are still some antidotes in fiction. Morrisson's "Cunning Merrell" describes the witch "doctor's" work and fakes while Anstey's "Fallen Idol" gives a certain support to occultism, which is offset by its humor and satire. Doweism gathered up the middle class introphobiacs who revelled in the ecclesiastic opposition to science which the Greeks symbolized in the Prometheus Myth.

When Prometheus, an early friend of man, had wrenched fire from the hands of Zeus and presented it to the poor mortals, the wrath of the king of gods knew no bounds, and he determined upon revenge. Pursuant to this he ordered Hephaestos to model a woman, and induced all the immortal gods to adorn her with the costliest gifts at their command. The result was a being of resplendent and fascinating loveliness, named Pandora. To Hermes fell the lot of conducting her to the earth and into the presence of Epimetheus. Although forewarned by his brother Prometheus not to accept presents from Zeus, Epimetheus nevertheless could not withstand the beauty and attractiveness of Pandora, giving her hospitable shelter and accepting from her a box as a gift from the gods. Hardly had he lifted the lid when there poured forth from the box wailings and lament, hunger and want, distress, sickness and suffering immeasurable. Becoming terrified and quickly attempting to close the box, he saw that Hope, which was the last to leave the box, had been caught by the lid, and thus the only consoler of man ever afterward presented herself in a sadly distorted condition. Ever since this occurrence wasting fevers haunt the land, and pale and hollow-eyed disease pursues man wherever he goes. Prometheus was by Zeus chained to the most desolate rock in the Caucasus.

The myth further tells us that a certain god took pity on suffering man, and, in a measure, at least, to console and help him, taught him the art of healing. This was Aescu-

lapius. He was the son of Hermes and Caronis, born near Epidaurus, and was there left to his fate at the foot of a mountain. A goat nourished him. A shepherd dog protected and watched over him. Later Hermes intrusted his education to the Centaur Chiron, who mainly instructed him in the art of healing. Aesculapius, an apt scholar, very soon became such a master that he not only healed the sick and wounded, but even brought the dead to life again. This restoration of the dead excited the wrath of Pluto, the god of Hades. He complained to Zeus, and the latter killed the culprit with a thunderbolt for daring to interfere with the natural limits of human life.

Later legend assigns as the real cause of his sudden, ignoble taking off, that he had, contrary to the will of the gods, taught the art of healing to man.

The iatrophobia here apparent appears also among the Hebrews: "Asa sought not the Lord, but the physicians and Asa slept with his fathers!" Among the Christians in the first century the direction, "if there be any sick among you let him be anointed with oil and let the elders pray over him," developed into the Holy Unction of the Roman church and the iatrophobic practices of the "Peculiar People" of England whose doctrines were given such a fungus growth by Dowieistic, billingsgate and state socialism. Iatrophobia of this occult origin has remained through the centuries, blossoming out not only in Greatrakes, Louthorboard and Cardinal Hohenlohe, St. John Langiser, Eddyism, Schweinfurthism, Shakerism and Perfectionism, etc., but in the occultism which clings to patent medicines and appears in the "dynamic energy" of Hahnemannia. The mobilization of these factors has been peculiarly the function of the male and female instability, rebellious against natural law and hungry for a new sensation. This has been aided by that feminine hysteric tendency which makes her, when young seek, as Stevenson says, yes and when old become an apothecary.

The tendency to ascribe a lack of spirituality (which, according to Spurgeon is by a strange, yet natural, law placed next to sensuality) to physicians appears in the medieval proverb, three physicians, two atheists. The "atheism"

means, of course, rejection of occultism. The ascription of the growth of Eddyism, Dowieism, Mazdanism, Schweinfurthism, Spirit Fruitism and allied cults to increased spiritualism is correct, if the Spurgeonian and Primitive Man conception of spirituality be adopted. This, however, implies a recrudescence of primitive occultism through intellectual stress from financial revolutions whereby the intellectual scum rises to the top. The mental atmosphere of the parvenu is a thin varnish over primitive man.

During the late 19th century, as Kiernan remarked, 25 years ago, the old fetichitic¹³ ideas held their own. With American college professors, University of Albany and Virginia proclaiming their belief in demon possession, with medical journals containing articles advocating similar doctrines; with Georgia medical dreamers advocating "hairless dogs" in the treatment of rheumatism on the "sympathy" principle; with the "hunchback" touching guard against disease in full luxuriance in Atlantic cities, with vast industries devoted to the manufacture of "patent" medicines, and a popular press teeming with their marvelous virtues, it is hardly time to boast about general enlightenment and acridly criticise the Middle Ages. An age which accepts remedies prescribed by "spirits," "angels," etc., regards "Science and Health" as a "book inspired by God" cannot be too tolerant of the errors of preceding periods.

13. History of Pharmacy: Peters.

NOTES ON THE HISTORY OF PSYCHIATRY.—II.

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(Continued from page 89, Vol. 31, 1910.)

IN *The Alienist and Neurologist* for February, 1910, I published some notes on the History of Psychiatry, of which this second contribution is a continuation. In a paper on Dementia Præcox: A historical summary, New York Medical Journal, March 12, 1910. I discussed this disorder, utilizing some of the fragments which may be found in the older writers which show that the disorder was not unknown to Hippocratic writers, although confused by them under the broad and loose nosological conception of imbecility, stupidity, etc.

In the present contribution I should like to continue from Friedreich's work¹ and give in a general translation some of his comments on post-Hippocratic writers, adding as seems opportune what other suggestions may come up.

After discussing the work of Hippocrates, Friedreich takes up Erasistratus. This author, born on the island of Keos (died 280 B. C.), was a student of Metrodorus, himself a student of Chrysippus, a contemporary of Aristotle. Erasistratus and Herophilus, two of the most powerful students of the Alexandrian school, were practically contemporaries,² and lived in Alexandria for a time.

As Erasistratus was probably Court Physician to Seleukus Nikator of Antioch, much is known of his life, although his works were all lost, and apparently even before Galen's time.

1. F. H. Schwarz: Herophilus und Erasistratus. Eine historische Parallele. Wurzburg. 1826.

2. Versuch einer Literärgeschichte.

He apparently wrote considerably, as works on fever, diagnosis, blood, gout, paralysis, cause of disease, deadly sicknesses, etc., are recorded. Galen, Caelius Aurelianus and Gellius also testify to his having written an anatomy in which considerable attention was paid to the brain. Erasistratus dissected the brains of lower animals, described their fissures, the functions of the same.¹ He placed the soul in the cerebellum; Plutarch says in the *dura mater*; understood the difference between the sensory and motor nerves, (Russus), both of which come from the brain, although not always separating the nerve trunks from the tendons.

We possess one fairly well authenticated story regarding Erasistratus' diagnostic skill in the psychoses. This is related by Appian (*de hell. Syr.* 126, p. 204) and by Lucian (*de Dea Syria*, p. 564,) but without names, whereas Plutarch (*vita Demetrii*) mentions him by name. The story is as follows:

"Stratonika, the second wife of King Seleukus, was loved desperately by her stepson. The prince did not dare confide in anyone, and in his despair became sick. He apparently suffered no pain, and gradually declined without anyone being able to discover the cause. Erasistratus finally disclosed in the following symptoms, *i. e.*, sunken eyes, weak voice and paleness, a case of secret love.

Having disclosed this much, he took the following means of getting at the bottom of the case. Laying his hand over the heart of the patient, he had all the women of the palace come into the room and as they all passed through the room the patient was not disturbed until the appearance of his stepmother, then his color changed, perspiration appeared, his entire body trembled and his heart beat was accelerated.² After Erasistratus made known the cause of the disease to the King Seleukus, the king out of love for his son gave, Stratonika to him as wife, and his recovery soon followed.

1. Galen. *de dog Hipp. et Plat.* Lib. 7. *De usu part.* Lib. 8.

2. Sprengel: *Hist. of Medicine*, B.1, p. 540. Möhnson: *Collection of Portraits of the Greatest Physicians*, Berlin 1771, p. 216, 173 *Valer Maxim*, Lib. V. Cap. 7.

NOTE.

It seems that this story was very interesting to numerous artists, because they chose it as the subject of their productions. One of the first to use this story as a subject was the painter Paul Calliari of Verona, known better under the name Paul Veronese. Peter Berrettini painted the story on the ceiling of the palace of Pitti in Florence.¹ In addition Andreas Sacchi, Colin de Vermont in Paris, 1727, the distinguished Adrian van der Werf,² Carl de Moor³ Gerhard Hoet,⁴ Father Gerhard Sanders and Lairesse painted the story.

This subject was engraved on copper by Cochin after the painting by Paul Veronese,⁵ and by Lambert Vischer after the painting of Berrettini. The painting of Andreas Sacchi is found as one of the engravings in the old collection of Lord Grosvenor. It was also engraved in England, the latter is found in a publication of a collection of engravings.⁶

Friedreich goes on and discusses Diokles. (p. 55.)

XII.

Diokles, from Karystos, born in Euboea, lived a short time after Hippocrates. His writings were lost.⁷ Galen, Caelius Aurelianus and Oribasius have given us some fragments of his writings.⁸

He says (Tobsüchtige) the wildly delirious that cannot be subdued, should be treated by means of baths.⁹ Most vigorous youths, plethoric individuals and wine drinkers should have their blood let within the first six days, others about the seventh or eighth day. In the meantime their sublingual vessels should be opened.

1. Dargensville: Lives of the Most Distinguished Painters. Part 1, p. 371.

2. Van Gool: Nieuwe Schoneburg der Nederlandsche Kunstschilders. Deel II, p. 389.

3. Gool, a. a. O. S. 433.

4. Catalogus of Naamlist van Schildereyen met derzelven pryzen, uytgegeven door Gerard Hoet, 1752. 1 Deel, p. 314. N. 12 II Deel, p. 162. N. 76.

5. Pitture scelte e dichiarate da Carla Caterina Patina in Colonia, 1691, p. 199.

6. Library of the beautiful sciences and the free arts. XI. Vol., p. 183.

7. The titles of the same are found most completely in J. A. Fabricius Bibliotheca Graeca. Vol. XII.

8. They are gathered in Grüner, Halle, 1782. Vol. II., p. 605, etc. Library of Ancient Physicians.

9. Compare our modern day hydrotherapy for the excitements. S. E. J.

XIII.

Philotimus, a classmate of Herophilus and follower of Praxagoras is known through a cure of a patient who suffered from the fixed delusion (*Wahn*) that he was decapitated. He placed a head covering of lead upon the patient, who was finally convinced, because of the weight and pressure of the head covering, of the actual presence of his head. Aetius¹ participates in this story.

OBSERVATIONS.

I wish to remark here that Alexander of Tralles² relates the same story of a physician named Philodotus, of whom he also relates another interesting story of psychic cure of a fixed delusion (*Wahn*). I will use this story in XXI. I cannot determine whether Philotimus and Philodotus are one and the same person.

XVI.

Next in rank to Hippocrates is A. Corn. Celsus,¹ born in Rome or Verona. Although between the first two centuries, none of the writers seem to have determined just what the exact dates of his life were³ (literal.)

Celsus actually deserves the name of the first medical writer of psychology, because one finds in the beginning of his books on medicine⁴ a separate detailed discussion on diseases of the mind.

What is generally called paranoia (*παρανουα*) in the writings of Hippocrates, Celsus calls "insania," (insanity.) He arranges it into three kinds; the first kind he gives the Greek name phrenitis (*φρενιτις*), to the other two kinds he gives no particular name. I will attempt to bring out the most essential features.

I. The first type of insanity is Phrenesis.⁵ It is indeed known that in the heat of fever patients talk irrational-

1. Tetrab. II. Serm II, Cap. 9.

2. Compare Jelliffe: *Psychiatry of Augustan Era*. Bull. Johns Hopkins, 1909.

3. Celsus lived through the reign of Augustus, his death probably just before the death of Augustus; in the first or second century of the Christian era.

4. A. C. Celsus de medicina libri octo. (I cite here from a publication by L. Targa Argentor, 1806, in which the first volume contains the text of Celsus, the second volume some letters of Morgagni, Cognolatus, Targo Torellus and Facciolatus about Celsus and also the notes of Targo).

5. De Medic. Lib. III. Cap. 18, p. 136.

ly; this, however, limits itself by the length of the disease, and requires no other remedies except those indicated for acute diseases. The real phrenesis is at present "*cum continua dementia esse incipit, aut cum aeger, quamvis adhuc sapiat, tamen quasdam vanas imagines accipit; perfecta est, ubi mens illis imaginibus addicta est.*"¹

The manifestation of this insanity (*Irresein*) is various. Some are happy, others are sad; some are easily subdued, others are ferocious and must be forcibly restrained. They must be tied. We should not be moved by their apparently rational pleading and begging to let them free.² (*Quoniam si dolus insanientis est.*)

Among the ancients these patients were kept in the dark, because they believed darkness quieted the mind. Asclepiades, on the contrary, maintained that they should be kept in the light. Moreover neither the one nor the other will always prove effectual, one must be guided by the circumstances, some are quieted more by light, others, however, more by darkness.

In the more severe delirious attacks, drugs are superfluous as they cause the fever to rise; one can do nothing here but keep the patient in a closet.³ Asclepiades says to let blood from such a patient is equivalent to killing him, because delirium is always accompanied by fever, and blood letting can only be performed in a proper manner after the subsidence of the fever.⁴ During the intervening time the hair should be clipped, and the head bathed in water in which herbs of a cooling nature have been steeped. They should be given vinegar of rue to smell and sneezing should be promoted by sneezing provocatives. If the patient is very weak the head is moistened with rose, thyme and the like.⁵

1. Page 137.

2. The passage in my edition says: "*Neque credendum est, si vinctus aliquis, dum levare vinculis cupit, quamvis prudenter et miserabiliter loquitur.*" Some of the other editions have, after the word "*cupit*" the postscript "*sanuum jam se fingat, quamvis,*" etc., and instead of *loquitur* "*loquatur.*"

3. Page 138.

4. This Celsus confirms in another passage, Lib. II. Cap. 10, p. 75-76. "*Quod si vehemens febris urget in ipso impetu ejus sanguinem mittere, hominem jugulare est. Expectanda ergo remissio est,*" etc.

5. Page 139.

When the fever has discontinued, friction should be made use of, but more sparingly on those who are happy than on those who are sad. The bashful must be cheered up, the unruly subdued, sad thoughts should be dissipated by means of music, activity and the like. It is especially necessary to produce sleep in those who need it, by¹ means of the following hypnotics; the head should be washed with water from poppy capsules, gentle rubbing, or rocking in a suspended bed will be effective. The diet should be light. Honey water should be given as a potion, three cupsful at a time, twice in winter and four times in summer.²

II. The second type of insanity has a larger interval. It begins without fever, but later there is a marked onset of fever. They are characterized by melancholia that appears to be due to black bile.

In these cases blood letting is indicated; if this can not be done then the patient is made to fast and vomiting is produced by giving hellebore.

Friction rub given twice a day, body activity and free movement of bowels maintained. In addition the spirit of the patient should be kept up and every opportunity to cheer the patient taken advantage of.

If fever associated itself with this form, it should be treated the same as fevers of its own type.

III. The third type of insanity has the longest duration. We can distinguish two kinds of this third type. The imagination either reflects false pictures or the mind is fettered with distorted conceptions.⁴

In the first kind one must find out if the patient is happy or sad. If depressed they must be purged with black hellebore; if happy vomiting should be produced with white hellebore. If the patient will not take these remedies, they should be mixed with the food. If the patient is not affected by reasonable remonstrance, force must be made use of;

1. Page 140, 141.

2. I read it thus in my edition "*ternos cyathos bis hieme quater aestate.*" But in other editions it is: "*ternos cyathos hieme, aestate vero quatuor.*"

3. Page 142, 143.

4. "*Nam quidam imaginibus, non mente falluntur; quales insanientem Ajacem vel Orestem persepisse poetae ferunt: quidam animo desipiunt.*"

if the patient says or does anything improper, he is influenced by hunger, stripes and beating. It is also good to divert his attention to other subjects, give him something to memorize. Is the depression very marked and persistent, the body is rubbed twice daily; cold water is poured on the head, and the patient set in an oil bath.

Especially do the mentally deranged (insanientes) require plenty of bodily exercise, frequent friction rubs and light diet without wine. They should not be left alone nor in company of persons that are offensive to them. When the mind has cleared the patient should be sent on a journey for at least a year.

In the study already cited¹ in the psychiatry of the Augustan Era more attention was given by me to Asclepiades than to Celsus. Friedreich has not done full justice to Celsus and for this reason I add another account of the work of Celsus by a well known psychiatrist of the early part of the century. It is added here because of the clear discussion he gives of the symptomatology of the ancients. I refer to K. F. Fleming's *Einige Beiträge v. d. C. Celsus, Kapitel von den Geistesverwirrungen*. Jacobi u. Nasse. *Zeitschrift für Seelenkunde*. 1837. No. 3.²

The Chapter on Delirium (Phrenitis) in Celsus.

It is certainly proper that he who occupies himself with the study of mental diseases should also acquaint himself with the views of the ancient medical writers. For all reviewers should give due credit to the results of their predecessors in the science of medicine, and a clearness of reason, freedom from criticism and deep knowledge of human nature should be the standard rather than narrow criticism of their limited knowledge.

In the first four sections of the excellent text book on medicine by Celsus, in which he treats of internal diseases, there is a very complete article in chapter 18, book 3, headed "*De tribus insaniae generibus et primo de eius curatione quae a Graecis *phrenitis* dicitur.*" Here too we find that beauty

1. Jelliffe: *Psychiatry of the Augustan Era*. Johns Hopk. Bull. 1908.

2. I am indebted to Dr. C. Bruder, formerly interne at the Government Hospital for the Insane, Washington, D. C., for this translation in great part.

of presentation and fullness of concise expression which has distinguished Celsus in his writings, especially on surgery. Another of his characteristics is his clearness of presentation, which is noticeable in all his writings; the author has been compelled to modify from his own views and direct experience the suspicions held by critics that Celsus wrote more as a compiler than as a physician.

Even if this could be proven in any part of the work, it would in my opinion be in the discussion on delirium. This brings up single observations, which if taken without all critical suspicion are quite capable of bringing up the question as to whether Celsus sufficiently observed the patients of whose ills he treats in his writings. We will not be too hasty here in our judgment, but consider that we have in our own period a multitude of capable physicians who make use of work done before them, and whose aim is preferably directed to the observation and treatment of mental disturbances, but are men who never succeed in giving a clear, comprehensive, satisfactory picture of the disease, nor bring their irregular views on the conditions and the practical treatment in accord.

Celsus joins his article on mental disturbance (*Geistesverwirrung*) with the preceding one on the treatment of fever; he begins as follows, the treatment of fever is presented. There still remain other diseases (*affectus*) of the body, which join to them, of which I will quote directly, "*qui certis partibus assignari (non) possunt.*" From this it appears, at first as if he takes all the symptoms of diseases which are included under the head of "*insania*" not as independent, but as accidental to other diseases to which they are joined. Therefore, he does not take it as he does at a later period, where under his conception of mental disturbance he thinks of a special disease, and on the whole likens *insania* and *delirium* and takes it for a form of indisposition (*aegritudo*) and not as a disease.

This view in no way belongs to modern times as Willis (*De Anima Brutorum* P. H. Cap. X.) has already brought out. Still we encounter here certain uncertainties in the text, which however, are easy to settle. Celsus considers

mental disturbances (*Geistesverwirrung*) among those diseases, "qui certis partibus assignari possunt." Thus it reads according to some manuscripts from which Almeloveens' edition is taken, others have it "qui certis partibus assignari non possunt," of which Lesart is the original; concerning this the beginning of the fourth book decides for it agrees with all other editions: "Hactenus reperiunter ea genera morborum, quae in totis corporibus ita sunt ut iis certae sedes assignari non possunt; nunc de his dicam quae sunt in partibus." We must also read in our passage "qui certis partibus assignari non possunt," and consider that Celsus takes the mental disturbances (*Geistesverwirrung*) like malum cardiacum, lethargy, etc., as the phenomena of a specially localized disease of any particular organ.

Further than this Celsus says nothing on the nature of "insania" and even where in his treatment he directs especially application of various agents to the head, such as unctions and fomentations, cold cloths and cold applications on which he lays especial stress, he is merely following out an empirical rule, without any special reference to mental disturbance as given in 2nd chapter of Book III, "morbis, qui nascuntur a capite."

Celsus considers three kinds or forms of mental disturbances (*Geistesverwirrung*). The nature of their difference consists in the presence or absence of fever, and on the length of the course of the disease. The first kind: "Illa quae et acuta et in febre est," is the phrenitis (*φρενιτις*) of the Greeks; the second which has a longer course, because it usually begins without fever and only develops febrile disturbances later. It consists of a depression which is due apparently to black bile. The third is the most chronic of the three and causes no damage to life, and generally is found in a strong body. This classification corresponds entirely with that of Willis in which he (A. A. D. Chap. 10 to 12) speaks of delirium and phrenitis, melancholia and mania; still he tries to add to it in chapter 13 "stupiditas sive morosis." The diseases belonging to that state are without a doubt the same as that which Celsus understands under Attonitis, a condition of disease which differentiates from the other kinds of mental disturb-

ance (*Geistesverwirrung*) in the 26th chapter of his third book. He treats of it only lightly, it occurs seldom, the body and mind are dull, paralytic strokes occur at times, and again at other times there is a disturbance from other disease. These must be treated by blood letting, emetics, purgatives, rubs and adherence to dietetic regulations.

Celsus' comprehension of pathology probably did not permit him to associate the depression of the mind's activity with the disturbance of the same, at least he did not consider them as having a common cause. Very likely he was himself doubtful as to what class to put them in, and because of some of their symptoms he put them among the types related to paralysis. That he also had in mind here those depressions of the mind which always associate themselves with disease is made evident even in the short contents of this chapter; and that such a striking form of disease as stupidity should fail of mention by him in any other place, makes this the more evident.

Further there are instances of actual as well as apparent stupidity for which the expression "*attonitum esse*" is so appropriate that it was used for a form of melancholia, which actually is only a melancholic performance, so that it was given the name "*melancholia attonita*" in the nosological classification.

Returning to the first kind of mental disturbance, (*Geistesverwirrung*) namely the acute and feverish, we find that, according to Celsus (Book III, Cap. 1,) an acute disease is one which quickly terminates in death, or soon runs its course and terminates in return to health. From this very relative and uncertain characteristic the author leads to another form in which fever is more apparent. He speaks, therefore, of a mental disturbance which appears as a symptom or accompaniment of feverish disease.

These mental disturbances (*Geistesverwirrung*) which, even though they are very acute, lasting at most twenty-four hours, but which may appear without any marked fever or inflammatory disturbance, the last two facts, we have only become aware of in modern times, and to which we give the designation *amentia occulta*, (but which might better

be called *mania brevissima*) apparently Celsus has entirely overlooked, or more probably, since he does not even casually mention these facts, did not recognize them. He speaks more of inflammation or inflammatory irritation of the brain which is designated (*φρενιτις*) by the Greeks. With this word, as is well known, various of the older authors, for example Aretaus, designate all the symptomatic deliriums; but Celsus says distinctly that he speaks, not of the deliriums which set in during the height of a fever, and which disappear with its remission, but (Hippocrates uses the word *φρενιτις*) for the persistent disturbances of the mind which he describes very well both according to the form and grade of the delirium. However, he places first the fever which is a persistent and serious one which is especially evident when he employs letting of blood from the arteries. From this it is quite evident that the discourse is either about an inflammatory condition of the brain, or a nervous fever, or both. For it is not clear from what Celsus has to say about fevers, or about phrenitis, whether he has made a distinction between these two diseases. From this it appears even here to me that by not mistaking this importance that our old Roman physician considered the mental disturbance in both acute and chronic diseases as similar in their essentials, a view which lasted for a long time, and only perished in an error of more recent times, when we thought to recognize a moral erring in a healthy body in the chronic form of mental disturbance. And what an effort it has taken to rid ourselves of this error, and to return to a simple old truth.

However, we must note in this part of the discussion a discord which distracts from the praise given it. After giving the somatic treatment of phrenitis the author deals with certain psychic behavior that is to be observed in such patients.

Concerning this, says he, one must treat those who suffer from this form of mental disturbance in such a way as the conditions require. Those who are fearful should be pacified; he who fears starvation should be deceived by picturing himself as the possessor of a fortune; the unruly

should be subdued even by whipping; excessive laughter should be stopped by reproach and threats; sad thoughts should be banished. In general the wanderer should be agreed with rather than opposed, etc. Some of these directions may be of value if considered in symptomatic and palliative treatment; others, like the employment of music and whipping in case of a very disturbed nervous system may find excuse in a student like and crude empirician; others are utterly impossible of application in the treatment of such an acute disease as phrenitis.

Would we, for instance, according to the advice of Celsus, burden with lectures a patient in the delirium of fever, or try and force him to recite some memorized story? Or could we expect to take a fever stricken patient to a banquet and expect him to overcome his antipathy for food, by watching the banqueters eating? If it could be shown that Celsus was in earnest and actually wrote these directions to be applied to phrenitics, I should at once say he had never seen a case of phrenitis. For he would have seen of necessity that they are not applicable, and even if they were could do no good. It might be that he speaks here not of phrenitis, but of its eventual sequelae. This cannot be true, however, for he speaks of the somatic treatment of phrenitis just before and immediately after this passage. For it appears if Celsus wished to speak of the sequelae and secondary conditions which are the residuals of fever he would have done so. This, however, he has not done since he has only incidentally in two places mentioned the damages connected with phrenitis where he says to promote lethargy with narcotics, and where patients fall or fail because of *malum cardiacum*.

Should we not, in order to save the reputation of the author, (I put it thus to avoid if possible the interpretation of this passage as an error of the author) place the entire passage "*Adversus omnum*" to "*los collocaverunt*" in another part of the discourse that is after the discussion of the third type of mental disturbance and thus make it seem more applicable? It would fit in a great deal better after the passage or words: "*item super caput aqua frigida infusa deniis-*

sumque corpus in aquam et oleum." It is quite easy to distinguish a sort of similarity in the commencement of this sentence and the commencement of the sentence which follows in the text. "Adversum omnium auternhis insanientium animus"—and "omnium vero his affectis." It is quite certain that earlier hasty copyists have by such a similarity in the commencement of two sentences been misled into detecting a relationship between them, and thus have found an adjustment by changing one in place of the other. Could we determine to make such an alteration in the text we would unite these two similar passages treating of the somatic treatment, take out the entire heterogeneous passage that appears between them and place it under the part of the text which treats of the psychic treatment of chronic mental disturbances. Any such change must, however, be left to the critics.

The second type of mental disturbance is shown by short but characteristic passages to be understood as melancholia by the author. "It extends over a long period, begins usually without fever and only during its course are light feverish symptoms developed, its chief characteristic is the sadness, depression and its most probable cause is black bile."

His description contains essentially all that is known about melancholia to-day (1838). His treatment is given very briefly, but is quite rational, both the somatic and psychic. He indicates that blood letting is valuable, but not always allowable. Great stress is laid on the consideration of the proper regulation of the diet, with proper regard for bodily strength and the necessary bodily exercises. Emetics on an empty stomach, which play such an important role in later times in the treatment of chronic mental disturbances (more particularly Wahnsinn), were even looked upon by Celsus as advisable, only, however, when the strength of the patient was good. Free purgation of the bowels should be provided.

The psychic treatment which Celsus advised is in no way of great importance nor emphatic; it is more to occupy and to enliven the patient; it is not intended as a cure, but as an aid to the cure.

The third type of mental disturbance (*Geistesverwirrung*) pictures chronic *Wahnsinn*, which has such a long course, and which may extend over an entire lifetime. Celsus distinguishes two kinds of this last type. The one where the healthy mental activity is misled by visions (*imaginibus*). As examples he mentions Ajax and Orestes, of the poets. The other form where the mental activity, reason and judgment do not act properly and cause the patient to draw false conclusions from his perceptions.

The first form, which without a doubt includes all of the first stage of our present *Wahnsinn*; and is dependent upon either local or general plethora, or slight congestion of the brain, with which are associated illusions and hallucinations, is designated as the milder of the two for, says he, that after effective and complete purgation of the digestive canal the disease will have disappeared. Experience confirms this, but also shows that the two forms cannot always be at first distinguished, since the first is often associated with the second in that the first stage passes rapidly into the second, and we must consider therefore the gradual transition as a distinguishing characteristic. With the exception of douches and immersions Celsus used no medical treatment, but sought to combat the second form (crazy-wit and foolishness—*Wahnwitz* and *Narrheit*) by psychic and dietetic treatment. Experience has shown him to be correct in so far that in the later stages of typical chronic mental disturbance, the disturbance in the abdominal viscera is compensated, while the secondary disturbances of the encephalon have become so habitual that medicines are of as little value as the psychic treatment.

We find here one observation that Celsus has very openly taken from the writings of Hippocrates. He says: "*leviorum esse morbum cum risu quam serio insanientium.*" This is exactly the same expression found in the fifty-third sentence of the sixth book of aphorisms by Hippocrates, but which undoubtedly speaks of deliriums of feverish diseases. If it is to be applied to the chronic form of mental disturbance it must be at least only in a limited sense.

In closing, if we take a general view of the discussion by

Celsus, of the three types of mental disturbance, we cannot help but notice that it contains the principal features of the various views, which up to now have controlled the treatment of chronic "Irresin."

It is the psychic method that is presented in the directions by Celsus in combating the various phantoms (*Wahnbilder*) and visible moral errors. Further, who would not have to think of empirical somatic methods in the following words: "In tristitia nigrum veratrum, diectionis causa—in hilaritate album, ad vomitum excitandum, dari debet?" Who could mistake the idea of indirect psychic method where it says, "Si vero consilium insanientem fallit, tormentis quibusdam optime curatur." Then the "tormentis" are enumerated as hunger, fetters, whipping, compulsory mental practice, agitation of the emotions, fear and fright, cold douches and immersion of the body. Only in the ingenuity of the invention of similar instruments of torture has the more recent time surpassed Celsus. We will also recognize that in general Celsus places the greatest importance on the somatic and dietetic treatment and that he recommends the psychic treatment only as a symptomatic and auxiliary remedy and that he only advises it as single remedy where nothing but a symptomatic course is left to the physician or where improvement and restoration is a matter of training."

The symptom pictures of Celsus have not yet been translated into modern symbols. They are not all capable of easy formulization, but many of the descriptions are full enough to permit shuffling the cards into more recent nosological concepts. After presenting a chapter from Falk I hope to be able to do this.

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IS GENIUS A SPORT, A NEUROSIS OR A CHILD POTENTIALITY DEVELOPED?*

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THE dangers of subsidizing any art through an organized body pointed out by Macaulay, Philpotts and H. G. Wells appear emphatically outlined in the famous decision of the Naples Academy so satirically exploded by Salvator Rosa. A picture painted by a surgeon was excellently done. The Academicians (unlike Florentines whose poet Dante was a member of the Apothecary's guild and whose great family De Medici sprang, as their name denotes, from an apothecary), snobocratically refused to recognize a medical man as an artist. Rosa then exhibited the surgeon's picture among them without announcement of authorship. Artists came in crowds to praise the surgeon's picture. When they admired it to Salvator Rosa's satisfaction he announced it was the surgeon's work. "But," added Rosa satirically, "I think the Academy acted unwisely, for if he were only a member of that body they would have the advantages of his

*Continued from *Alienist and Neurologist*, Nov., 1910.

advice in setting the broken and deformed limbs exhibited by the Academicians." That such snobocratic philistine notions are still potent is shown in the recent proposal of an Oxford don who was elected a member of the new-fangled British Academy of letters who shows uplift tendencies degrading in effect by proposing to exclude Kipling and Anskey and to punish them for insulting that pomposity, the fudian Baboo, so akin to the Oxford don. That there is a certain art tendency crushed out by untoward environment has been pointed out, despite his teleologic bias, by Ruskin, who admits that much artistic intellect is daily lost in other avocations. Generally the temper which would make an admirable artist is humble and observant, capable of interest in little things, and of entertaining itself pleasantly in the dullest circumstances. Suppose, added to these characters, a steady conscientiousness which seeks to do its duty wherever it may be placed, and the power denied to few artistic minds of ingenious invention in almost any practical department of human skill, and it can hardly be doubted that the very humility and conscientiousness which would have perfected the painter have in many instances prevented their possessor from becoming one. In the quiet life of steady craftsmen, sagacious manufacturers and uncomplaining clerks may frequently be concealed more genius than ever is raised to the direction of public work or to be the mark of public praise.

Reappearance of art tendencies was a natural reversion to early states.

Art was an early acquirement of man. Beautifying of an object (as Haddon remarks) is due to impulses common to all men, which existed as far back as the period when men inhabited caves and hunted reindeer and mammoth in Western Europe. Craving for decorative art having been common to mankind for many thousand years, the only way to determine its actual origin, is study of the art of the most backward peoples, in the hope of sufficient light to glimmer down the black perspective of the past. Certain needs of man which appear to have constrained him to artistic effort, may

be conveniently grouped under æsthetics, information, wealth and religion.

Æsthetics is the study or practice of art for art's sake, for the sensuous pleasure of form, line and color.

The conveyance of information from one man to another, when oral or gesture language is impossible, requires pictorial signs of one form or another.

It is difficult to distinguish among savages between the love of wealth or power. In more organized societies, power, irrespective of wealth may dominate men's minds. Money is at first sought after in order to feel the power which wealth can command, but later the search degenerates into the miser's greed for gain. Desire for personal property and later for enhancing its value, led to the production of personal ornaments apart from a similar tendency purely æsthetic. There are emblems of wealth and emblems of power and authority. Barter led to the fixation of a unit of value later represented by symbols or money.

The need for man of sympathetic relations with occult powers always expresses itself in visual form and has gathered into it the foregoing secular triad. Art was an early accomplishment of the pigmy races. The Eskimo¹ who, their environment considered, are at an exceedingly high grade of culture compared with the American Indian, display artistic tendencies of great promise. On the other hand, as Keane³ has shown, the Bushman, almost at the lowest level of culture, possesses a sense of art far higher than that of the surrounding population, as shown in the rock paintings of men and animals true to life, found in their caves which recall the analogous representations of the Dordogne troglodytes. These rock drawings and paintings "differ much in aim and character. A large portion are of a caricature class, rudely but very spiritedly drawn in black paint. The class representing fights and hunts is a large and interesting one. Many of the drawings represent figures and incidents among white people, and of native tribes. Some

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1. Peschel; Races of Men.
 2. Evolution of Art.
 3. Ethnology.

even suggest actual portraiture. Ornamentation of the head-dresses, feathers, beads, tassels, etc., have seemingly claimed much care and given the native artists great pleasure in delineation. The higher class of drawings indicate correct appreciation of the appearance of objects. Perspective and foreshortening are found correctly rendered."

Lubke, Haddon,⁴ Sir John Lubbock⁵ and Otis T. Masson,⁶ and Wilson point out that the primeval stage of art, however, was one of geometric and arabesque figures. Otis T. Masson remarks that in the æsthetic as in the practical industries in the beginning the forms are at first extremely simple, little if at all removed from natural shapes. In short, if a common invention be a slight change in a natural object to improve its use, an art form is a slight change in an object to increase its beauty, to increase complexity in these changes with higher and better defined functions. As to the mental processes involved in the creation or invention of the beautiful, the law is the same. The first effort was extremely simple and undifferentiated, the highest effort involved the combined genius, the co-operative efforts of many minds, architects, sculptors, painters, ceramists, weavers, landscape gardeners.

The rewards of the artist are found at first in the granting by the public of some present material good or happiness or self-satisfaction. The inventor of cooking got a better husband and reared better sons. The first artists were quite similarly rewarded. The last result is the creation of a tribal or national feeling, criterion, taste which leads the people to bestow the highest rewards upon those who give the greatest pleasure. Too much must not be expected of the savage woman in her art work. She did not sit down deliberately to compose a form, a pattern, or a song, "she piped but as the linnets sing." The determinate purpose followed up with the accumulated apparatus and experiences of the ages is always the latest manifestations of invention.

4. History of Art.

5. Prehistoric Times.

6. Woman's Share in Primitive Culture.

The first inventor in art, like the first inventor in the industries, was the happy thinker, the acute observer, the apperceiver, the one whose senses were open to the forms and colors and movements and sounds of Nature.

No more should be expected of her than that she should be seized with pleasure in the presence of these and desire to imitate them. The first woman making a change in any natural object for the gratification which it afforded her as the starting points of three evolutions; that of the art itself, whether textile, plastic or musical; of herself in the practice of it, growing out of a mere imitator to be a creator; of the universal public appreciation of art, of what might be called the racial or the tribal imagination. As we have found that in the practical affairs of life comprehensiveness is the noticeable characteristics of women, the same ought to hold true in the realm of beauty. We ought not to look for great personal specialization, but for a multitude of kinds of pleasing work, done with the same pair of hands and co-operation of many in one operation. It need astonish no one to witness the plastic potter suddenly becoming a painter and then a weaver or embroiderer, nor a whole tribe of women erecting and organizing a camp. As for the drama and music, even these, as will appear later on, in the possession of women should be more home-like and less war-like.

In considering the æsthetic element of the textile art, Holmes includes three subdivisions of phenomena, connected with (1) form, (2) color, and (3) design. In executing the forms, colors and designs there are three degrees of predominance of the art idea. That is what a useful object had to be made of a certain shape, but in the making the woman wrought as symmetrically and deftly as she knew how. It is as though a needlewoman of our own day had a contract to fill, but by her own refinement was compelled to add a touch or two not in the contract. (2) That in which a vessel or a garment or a house convenience is the object in view, and just as much decoration is added as will not interfere with use. The Apache woman, covering the outside of a mush bowl with superb ornaments, would be an example. (3.) That in which use is sacrificed the æsthetic motif

as in all ages women have busied themselves in making textures too good and beautiful to use. The first beauty aimed at in the textile art by the savage woman is uniformity just as the beginning of music is monotony, the prolongation and repetition of a single tone. This uniformity is concerned with the texture and the shape of the product.

The prehistoric art tendencies crop up frequently in cases where artistic tendency seems at the first superficial glance the product of a genius sport. This fact and the fostering influence of environment appear, as Harriet Alexander points, in J. M. W. Turner.⁷ Not in London, but in Devon (that prehistoric home of the pigmy race whose love of beauty survived in the Dordogne caves and in fairy folklore), originated the Turners, whose stature and appearance recall that vanished race. The artistic tendency which cropped out in a paternal cousin proves that the love of beauty survived in the Turner race, despite the cockney. Popular opinion to the contrary notwithstanding, barbering, as history shows, is not necessarily philistine in its effects. Ambrose Paré, the reformer of surgery, was a barber. The father of Schiller, a barber, became a military surgeon and subsequently a landscape gardener and botanist.

Turner was a delicate child who required frequent country visits to keep him in health. The few details extant of these periods of illness point to their neuropathic character. Precocity appeared in Turner, who showed his powers by drawing, at the age of four, a coat of arms. At nine years he drew Margate Church. While with his Brentford uncle because of weakness which required change of air, he attended his first school and drew birds, flowers, and trees. His school-fellows, sympathizing with his taste, often did his "sums" for him while he pursued his bent. Very soon after this he began to make drawings. Some of his colored copies of engravings were offered for sale in his father's window. His father had intended him to be a barber, but, struck with his talent for drawing, determined that he should be a painter. He delighted in going to field and river to sketch. All early drawings, however, including those purchased at his father's

7. *Medicine*, 1896.

shop, are of buildings. There is nothing in them above those of any clever boy.

The trade of Turner's father brought about an environment which tended at once to plunge the boy into an art atmosphere and to raise the father's estimation of art. Among those shaved by Turner was the artist Stothard. In the immediate vicinity of the barber shop were an art academy, a society of artists, and several studios. There is hence no mystery about the source of Turner's art tendencies, which so puzzle Nisbet. Degenerate in appearance as Turner's father was, he was anything but hostile to art, and could make a pecuniary sacrifice to further his son's prospects. He refused to allow him to become the apprentice of an architect for nothing, and paid a better one for his apprenticeship. Educational cramming only in the art direction inevitably incapacitated Turner for otherwise assimilating knowledge.

Millais⁹ exhibited more marked precocity than Turner. His genius declared itself at an age when Sir Thomas Lawrence, considered an "infant phenomenon," was a mere bungler with the pencil. He was six when his sketches, made the subject of mess room bets won, them. At eight he won the silver medal of the society of Arts to the astonishment of the Duke of Sussex who distributed the prizes. His parents then brought him to London to await the judgment of the President of the Royal Academy, who spontaneously remarked without examination clearly from a previous boring experience with "infant phenomena," "Make him a chimney sweep rather than artist." Convinced that the sketches submitted were the child's work, he was amazed and told the parents their plain duty was to bring young Millais up an artist. Millais and Millet, the French realist, sprang from the same stock.

9. Life of Millais: Spielmann.

(TO BE CONTINUED.)

TRANQUILIZER FOR MANIACS.

SELECTED BY THE EDITOR.

As an interesting matter of history connected with clinical psychiatry one hundred years ago we introduce from the Medical Museum, volume I, number 3, pages 168-176, new series, published in Philadelphia in 1811, and conducted by John Redman Cox, M. D., the tranquilizer chair of Dr. Benjamin Rush, with description and medical commendations of the time.

It was used upon the maniacal patients of the Pennsylvania Hospital for the insane and is described as follows:

1. The chair.
2. A piece of board which is so fixed to the back of the chair as to be made to rise and fall with the height of the patient. To the end of this board is fixed:
3. A wooden frame lined with stuffed linen, in which the patient's head is so fixed that it cannot fall backward, nor forward, nor incline to either side.
- 4-5. Breast and belly bands, which are made of flat pieces of strong leather, and which confine the body in the chair.
- 6-6. Bands which confine the arms and hands of the patient to the arms of the chair.
- 7-7. Pieces of wood which project from the chair, in which the patient's feet are so confined as to prevent their moving in any direction.
8. A close-stool-pan half filled with water, so fixed as to be drawn out behind the chair and emptied and replaced without removing or disturbing the patient.

The chair is confined to one spot by means of staples fixed in the floor.

September 5, 1810.

DEAR SIR,

In attending the maniacal patients in the Pennsylvania hospital, I have long seen with pain the evils of confining them, when ungovernable, by means of what is called the mad shirt, or straight waistcoat. It generally reduces them to a recumbent posture, which never fails to increase their disease. In this state they often lie whole days and nights, and sometimes in a situation which delicacy forbids me to mention. The straight waistcoat moreover, renders it impracticable to feel their pulses, or to bleed them without taking off the greatest part of it. To obviate these evils, and at the same time to retain all the benefits of coercion, I requested, by permission of the sitting managers of the hospital, Mr. Benjamin Lindall, an ingenious cabinet-maker in this city, to make for the benefit of the maniacal patients, a strong arm chair, with several appropriate peculiarities, as noticed in the drawing, which I have herewith sent you for your Museum. From its design, and effects, I have called it a TRANQUILLIZER.

It has the following advantages over the straight waistcoat:

1. It lessens the force of the blood in its determination to the head by opposing its gravity to it; and by keeping the head in a fixed and erect position, it prevents the interruption of the passage of the blood to, and from the brain, by pressure upon any of its blood vessels.
2. It produces more general muscular inaction, and of course acts more powerfully in weakening the force of the blood vessels in every part of the body.
3. It places the patient in a situation in which it is possible, without any difficulty, to apply cold water or ice, by means of a bladder to the head, and warm water to the feet at the same time.
4. It enables a physician to feel the pulse, and to open a vein, without relieving any other part of the body from its confinement, but a single arm. It enables him likewise to administer purgative medicines without subjecting the patient to the necessity of being moved from his chair, or exposing



him afterwards to the fœtor of his excretions, or to their contact with his body.

5. The body of the patient in this chair, though in a state of coercion, is so perfectly free from pressure, that he sometimes falls asleep in it.

6. His position in this chair is less irritating to his temper, and much less offensive to the feelings of his friends than in a straight waistcoat.

I have hitherto employed this chair only as an auxiliary remedy for the cure of the violent state of madness; but I have no doubt it might be employed with advantage in other diseases, in which a recumbent posture of the body has been found to be hurtful, particularly in epilepsy, head-ache, vertigo, wakefulness and sleepiness, and from too much fullness of the blood vessels of the brain. The back of the chair for such cases might be made to fall back at the pleasure of the patient, or to suit the grade of his disease.

I subjoin to the account I have given of the Tranquillizer, letters from two of the medical officers of the hospital, viz. Dr. Vandyke and Mr. Moore, who have faithfully attended to its effects upon a number of maniacal patients.

From dear Sir,

Yours very respectfully,

BENJAMIN RUSH.

Dr. J. R. COXE.

Pennsylvania Hospital, August 27th, 1810.

SIR,

I communicate to you with pleasure, an account of the effects I have observed, to result from the use of the Tranquillizer, lately invented, and introduced by you, into the Pennsylvania Hospital. Its beneficial influence is obvious:

1. Upon the mind—It calms and tranquillizes it, and by wearing down the excitement of the brain, induces sleep.

2. It reduces the force and frequency of the pulse. I think I have seen as great an alteration produced in the pulse by a few hours confinement in the Tranquillizer, as by the loss of the usual quantity of blood, drawn at a common bleeding.

It thus proves a most valuable assistant to the depleting remedies proper in cases of great mental excitement.

3. It debilitates, and as it were, paralyses the muscular system, and by opposing the will of the patient, prevents the wild, incoherent actions, depending on a wrong association of ideas. Besides these effects, it exerts upon the mind and body—the Tranquillizer is a useful machine, for two reasons:—

1. It restrains the patient more completely than the common coercive means, employed in the management of maniacs.

2. The use of the close-stool attached to it, preserves the decency and cleanliness of the apartments, and renders the situation of the patient more comfortable and healthy.

These, Sir, are some of the advantages that I have witnessed. Others may attend it, that have not come under my observation.

I am Sir, with respect,

Your humble servant,

FREDERICK A. VANDYKE.

DR. BENJAMIN RUSH.

4th 9th mo. 1810.

Having had frequent opportunities of seeing the Tranquillizer used upon patients of great maniacal excitement in the Pennsylvania Hospital, and the beneficial effects resulting therefrom; with pleasure I communicate the observations I have made concerning it, and think that it well deserves its name; and that it bids fair to be one of the most valuable articles in the treatment of such diseases.

Its effects are generally,

First. Upon the pulse.

Secondly. Upon the mind.

Thirdly. Upon the body.

SELECTIONS.

CLINICAL NEUROLOGY.

EXPERIMENTAL POLIOMYELITIS.—SIMON FLEXNER.—Poliomyelitis is due to a very small germ, since it passes the finest filters like the germ of yellow fever. It probably enters by the nose, and thence to the brain. It is communicable from one to another, and there probably are carriers. It is resistant to cold and drying, like rabies.

It has an incubation period of 4 to 33 days, and a period of onset of 1 hour to 40 hours, and it produces a diffuse encephalitis and myelitis, and not a poliomyelitis purely.—*Abstracted by G. W. H. for Dominion Medical Monthly from N. Y. State Journal.*

BLOOD-PRESSURE APPARATUS.—C. F. Hoover criticises the dependence placed on blood-pressure determinations by laboratory apparatus in clinical work. Since the sphygmomanometer has been devised, there seems to be a general concession by clinicians that endovascular blood-pressure can only be measured by instrumental means and that finger palpation is misleading. He admits the difficulty of determining the pressure by the radial or brachial artery. The only artery which really serves for this purpose is the femoral, which gives practically the lateral pressure on the abdominal aorta and lies on the pubis under the mastery of the finger. It has lately, however, been apparent that either high endovascular pressure does not tax the heart so severely as we formerly believed, or that measurements have been misleading. He illustrates his view by reports of cases and experiments showing how fallacious or inefficient instrumental work in this line may possibly

be. During the past four years it has been his practice to estimate the arterial pressure by palpating the femoral artery, and afterward to use the blood-pressure apparatus. A little practice will enable one to estimate the blood-pressure very accurately. In pressure between 150 mm. Hg. and 250 mm. Hg. he finds that there is rarely a disparity of more than 20 mm. between the digital and instrumental estimates, and as a rule the disparity is within 10 mm. He does not wish, he says, to discourage the use of a blood-pressure apparatus; it is a very valuable instrument, but its chief value consists in teaching us how to palpate the arterial pulse. No instrument can take the place of the finger, nor can any instrument teach as much about the pulse as can be learned by palpation.—*The Journal A. M. A.*

NOTION OR EMOTION IN TRAUMATIC HYSTERIA. THE RELATIVE VALUE OF THE AFFECTIVE AND THE INTELLECTUAL PROCESSES IN THE GENESIS OF THE PSYCHOSIS CALLED TRAUMATIC NEURASTHENIA.—By Tom A. Williams, M. B. C. M. Edin., Washington, D. C.

Southern Society of Phil. and Psychol., 1909. *Jour. Abnor. Psychol.*, March-April, 1910.

It has been commonly believed that emotional shock is a preponderant factor in chronic perturbations of the nervous system.

As a preliminary the author indicates current psychological views regarding the affectivity, pleasantness and unpleasantness, *les sentiments*, including angoisse, surprise, sexual sensation, emotion, passion and the role of the cenes-thesis. Opinions widely differ as to the classification and genesis of each of these, and experimental psychologists are appealed to for aid in solving the problems.

The author contends that emotional shock has no power to perturb for long unless maintained ideationally. He illustrates by familiar examples, and shows by other examples how different is the result when belief maintains an emotional attitude intellectually.

Furthermore the affective element of a fear neurosis need not even be primitive; it may even itself be induced.

Childhood again furnishes simple examples. Emotion by suggestion has a mechanism of this kind.

Hysterical emotion is of this type and is to be contrasted with psychasthenia, which the author believes to be more largely affective than does Janet. Ideo-genetic affective intellectual attitudes in folk-lore illustrate this, and the author quotes one of his cases as a modern parallel where this mechanism was the foundation of both the patient's illness and cure.

The reasons for failure in another case further illustrate; as do many "false neurasthenias," which are cured not by the rest imposed, but by the re-education then undergone.

The diagnosis and prophylaxis are then discussed in the light of the author's previous contributions.—*Author's Abstract.*

NERVOUS AND MENTAL DISTURBANCES OF THE MALE CLIMACTERIC.—By A. Church. *Jour. of the Amer. Med. Assoc.*

Church, after referring to the opinions and observations of various writers (the most thorough, however, those of Fleiss and Swoboda; are omitted), states his belief that there is a monthly rhythm in man as in woman, and, further, that men also pass through a certain climacteric. He has observed cases of epilepsy and migraine whose manifestations showed a monthly rhythm. At the climacteric various minor disturbances are common, particularly depression, anxiety (he erroneously includes obsessions under the anxiety neurosis), loss of weight, indigestion and increase in arterial tension. They have no serious import. The physical health should be built up.—*Ernest Jones' Criticism in Dominion Medical Monthly.*

THE DEPENDENCE OF NEUROLOGY ON INTERNAL MEDICINE.—By Collins and Bailey. *Jour. of the Amer. Med. Assoc.*

The main thesis of this paper is the neglect of neurology in America, and the importance of establishing neurological wards or hospitals where competent workers may carry out investigation and treatment. "Magnificent endowments almost yearly further the advances in surgery, medicine and

psychiatry (?), but neurology is left to take care of itself. . . . In the recognition of brain abscess, meningitis, acute intoxications and injuries of the nervous system, the student either goes uninstructed or else gets his instruction from men neither particularly interested nor particularly versed in these subjects. . . . Ever since the publication of Erichsen's book on spinal injuries, it has become every year more obvious that nervous diseases require men of special equipment, judgment and inclination to interpret them correctly. Neurology is more special in study and practice than any of the recognized subdivisions of surgery, just as special and far more extended than ophthalmology or otology. So thoroughly has it been recognized as a field of activity *sui generis* that no argument on the subject seems necessary. . . . We can claim no great achievement in the past ten years. American neurology is not only at a standstill, but its sphere is constantly being curtailed. . . .

As the neurologist has neither beds nor laboratories, the psychoses and neuroses with gastric symptoms have entirely passed from his hands and have lost their names. Under the mask of gastropnoia, mucous enteritis, and achylia, the patients are subjected for years at a time to the pernicious suggestions connected with local treatment. . . . And then that great wilderness of pathology, the psychoneuroses—what opportunity is furnished us to study them intelligently and thoroughly in this country? A hurried interview in the out-patient department, where neither the environment nor the facilities favor the slightest revelation of the soul, then the patients disappear into the maelstrom of Eddyism, quackery, and the commercial sanatorium."

Many of the remarks apply to Canada, as well as to the United States.—*Ernest Jones' Criticism in Dominion Medical Monthly.*

THE STATE CARE OF THE INEBRIATE. Neff. *Jour. of the Amer. Med. Assoc.*

"Individual consideration of each case is the only rational and effective mode of treatment. Abstention from alcohol is not sufficient for cure; it is required that the patient co-

operate in normal measures instituted for his betterment and the ultimate success of hospital treatment depends on this sustained treatment. A state hospital for the treatment of inebriety should be considered an educational centre; it should have adequate equipment for treatment of such cases, and should have facilities for segregation and individual treatment of the diverse types."—*Ernest Jones' Abstract in Dominion Medical Monthly*.

VASOMOTOR AND TROPHIC CHANGES OF CEREBRAL ORIGIN. Ingelrans (*L'Echo medical*, April, 1910), is quoted by the *Edinburgh Medical Journal* as thus noting the different circulatory and trophic changes seen in cases of paralysis of cerebral origin. In hemiplegias due to apoplexy the hand and foot often show a violet-red coloration, which disappears on pressure, leaving the skin a livid white color. Frequently there is also œdema around the ankle and of the hand. This œdema may be permanent, in which case the limb becomes hard and violet colored. The badly nourished skin is an easy prey to outside infections, resulting not infrequently in boils, sloughs, or gangrene. Trophic changes also occur in the nails. These lesions occur usually some time after the paralysis is established.

Ingelrans describes a case of left-sided hemiplegia due to apoplexy where, the day after the onset, the left hand and lower part of arm became greatly swollen, the skin became red as in erysipelas, and a few days later, on the left hand, a pemphigoid eruption appeared, with hæmorrhages under the nails. Over the thenar eminence there was a bleb as large as a hen's egg. It ruptured, and was seen to contain a yellowish serous fluid. On the back of the fingers were two similar blebs, and on the back of the hand several smaller blisters. Over the left trochanter was a large oval slough. The writer cites several similar cases previously published. The *E. M. J.* further adds:

Pruss has shown that there exist in the corpus striatum vaso-constrictor centres, and in the optic thalamus vasodilator centres, and Parton was struck by the almost constant presence of a lesion in the corpus striatum in cases

where there was marked œdema, hæmorrhages, or pemphigoid eruptions in cases of hemiplegia. It has been shown that the destruction of the cerebral cortex in the dog is followed not only by a motor paralysis, but also by a vasomotor paralysis corresponding to the area destroyed, and leading to a rise of temperature in the limb due to an engorgement of the paralysed blood-vessels. Stimulation of the cortex of the brain also leads to a contraction of the vessels of the part supplied. It is well known that the chief vasomotor centre is found in the medulla, but these may be connected with the cerebral cortex. In the case described by the author there was no cause for the skin changes except the cerebral hæmorrhage, but he points out that such changes are much more frequent where, in addition to the brain lesion, there is also a cardiac or renal lesion as well. In the latter cases both conditions contribute to the change in the skin. He concludes, from a study of his own and the reported cases, that in hemiplegia, where there are rapid vasomotor and trophic lesions in the skin, such lesions are due to interference with vasomotor centres in the brain itself, which are intimately connected with the vasomotor centre in the cord.

EARLY ENGLISH PRIORITY IN DESCRIPTION OF POLIO-MYELITIS. Dr. B. M. Randolph, of Washington, D. C., in a historical note on acute infective paralysis (poliomyelitis), says:

The first description of this disease is generally credited to Jacob Heine, of Stuttgart, who, in 1840, published his first monograph on the subject. While Heine did give the first accurate and complete description, and established it as a recognized disease, it has been generally overlooked that an English physician, Michael Underwood, called attention to it 66 years earlier (1774). For the benefit of those who have not access to Underwood's "Treatise on the Diseases of Children," the following extract is made from the second edition of that work, published in 1789:

"DEBILITY OF THE LOWER EXTREMITIES."

"The disorder intended here is not noticed by any medi-

cal writer within the compass of my reading, or is not so described as to ascertain the disease. It is not a common disorder, I believe, and seems to occur seldomer in London than in some other parts. Nor am I enough acquainted with it to be fully satisfied, either in regard to the true cause, or seat of the disease, either from my own observation, or that of others; and I have myself never had opportunity of examining the body of any child who has died of this complaint. I shall therefore only describe its symptoms, and mention the several means attempted for its cure, in order to induce other practitioners to pay attention to it.

“It seems to arise from debility, and usually attacks children previously reduced by fever; seldom those under 1, or more than 5 years old. It is a chronical complaint, and not attended with any affection of the urinary bladder, nor with pain, fever, nor with any manifest disease; so that the first thing observed is a debility of the lower extremities, which gradually become more infirm, and after a few weeks are unable to support the body. There are no signs of worms or other foulness of the bowels; therefore mercurial purges have not been of any use, neither has the bark, nor hot, nor cold bathing. Blisters, or caustics on the os sacrum and the greater trochanter, and volatile and stimulating applications to the legs and thighs have been chiefly depended on. . . . There is no appearance of an enlargement of any of the vertebræ, or joints of the back, nor suppuration in the external parts, and therefore no resemblance to the inflammation of the intervertebral cartilages, the psoas abscess, or the morbus coxaris. . . .

“When only one of the lower extremities has been affected, the above means, in two instances out of five or six, entirely removed the complaint; but when both have been paralytic, nothing has seemed to do any good but irons to the legs, for the support of the limbs, and enabling the patient to walk.”

It is interesting to note that Underwood's work on the diseases of children went through ten English editions, five American, two French and one German. The German translation was not made until 1848, that is, 8 years after Heine's publication. Heine refers to other English authors (Aber-

crombie, Badham), but makes no mention of Underwood.

For the reference which led me to the above extract I am indebted to Baumann, of Breslau, who mentions Underwood in his doctorate thesis.

The recent epidemic of poliomyelitis in many of the schools and in children beyond the infantile age and the discovery of an associate if not causative germ and the conception of its infectiousness gives a new clinical phase to this interesting disease. Our own personally observed cases, however, have been among children under or about five years of age, the attack coming on suddenly after stoppage of perspiration in summer time. One instance where an overheated child was left to fall asleep on a cold and shaded stone door-step, another after the cold stage of a so-called "dumb chill," a form of malarial toxhemia, without marked febrile reaction, well-known in this latitude.

CLINICAL PSYCHIATRY.

HYPERSOMNIA OR PATHOLOGICAL SLEEP.—Disturbances of sleep form one of the most striking groups of clinical phenomena. Not alone in diseases of the central nervous system of organic and functional origin do these aberrations of sleep prevail, but also in conditions of disturbed metabolism and in infectious processes. The study of the physiology of sleep has for a long time engaged the attention of physiologists and psychologists, and many theories have been propounded in explanation of its origin. Basing his speculations upon the theory of the toxic origin of sleep, which theory has had many adherents, A. Salmon contributes to the *Revue de Medecine*, September 10, 1910, an interesting paper on the physiological mechanism underlying the production of hypersomnia. This condition is to be distinguished from somnolence, or the tendency to fall asleep, which frequently has a pathogenesis distinct from hypersomnia, though they may coexist. According to the toxic theory, sleep is an expression of the intoxication of the nerve cen-

ters by the effete products of metabolism. Salmon holds that these substances do not affect the nerve cells directly. During sleep the latter are engaged in the task of elaborating and storing up the nutritive reserve material residing in the chromatophilic substance. The toxic products of metabolism are neutralized by the internal secretions of certain glands, whose hormones at the same time have a stimulating action upon the reparative powers of the nerve cells. This hypothesis is apparently in accord with the clinical observation of the intimate relation existing between disorders of sleep and alterations in the hypophysis, thyroid, choroid plexus, and other ductless glands. Hypersomnia is one of the most characteristic symptoms of affections of the hypophysis. Insomnia has been described as one of the common manifestations of insufficiency of the hypophysis, responding effectively to the administration of pituitary extract. The indirect effect of toxic substances producing sleep is explained as follows: An increased production of toxic substances causes at first a hyperfunction of the hypophysis or of other ductless glands, with a resulting increase in the normal sleep.

Hypersomnia is described as one of the most characteristic signs of mild forms of thyroid insufficiency, and may occur independently of the usual manifestations of cachexia strumipriva. Myxedematous subjects are generally apathetic and frequently have veritable attacks of narcolepsy. Occasionally the somnolence of myxedema is followed by insomnia, which fact may be attributed to the functional exhaustion of the hypophysis resulting from its hyperactivity, and to a secondary intoxication of the nerve centers. Frequently hypersomnia is associated with a function disturbance of the genital glands. The menopause is generally accompanied by a tendency to increased sleep and to obesity. Hypersomnia is a frequent symptom in the slow intoxications of gastric, intestinal, hepatic, and renal origin. Obesity and diabetes are often associated with a hypersomnia of toxic origin. This is also observed in certain intoxications of infectious disease. This is strikingly seen in influenza, in which the increased tendency to sleep is followed during

convalescence by hyposomnia and insomnia. In cerebral syphilis hypersomnia is frequently observed. The hypersomnia of tumors of the brain represents one of the most interesting chapters of neuropathology. It has been described as one of the most characteristic signs of tumors of the frontal lobes, likewise of tumors of the base of the brain, hypophysis, third ventricle, and infundibulum. It is significant that those tumors residing near the floor of the third ventricle present the same symptoms observed in lesions of the hypophysis, namely, hypersomnia, obesity, mental troubles, etc. One of the principal symptoms of mountain sickness is an irresistible desire to sleep. This is to be attributed to passive cerebral hyperemia, which also explains the hypersomnia of those who work in compressed air. The sleep crises occurring in insolation are relieved by epistaxis. Passive congestion of the brain also explains the deep sleep following the epileptic seizure. Increase of sleep is frequently noted as one of the manifestations of adenoid vegetations of the nasopharynx. This may be explained by the observation of Civalleri of the presence in the posterior part of the pharynx of a gland having the same properties as the hypophysis cerebri. Adenoid vegetations have ever been regarded as aberrant hypophyses. Hypersomnia is one of the frequent manifestations of sphenoidal sinusitis, which is probably to be attributed to the contiguity of the sphenoidal sinus to the hypophysis, and to the fact that suppuration in either of these may be communicated to the other.

Salmon concludes that sleep plays a useful rôle in the intoxications affecting the nerve centers, and even in its morbid states represents a defensive reaction of the organism against these intoxications. The danger of toxic hypersomnia resides not in the sleep but in the intoxication; the efforts should be not to combat the sleep, but to seek to control the causes that tend to prolong it. The treatment would therefore consist, for example, in the administration of thyroid, pituitary, or ovarian extracts, the regulation of diet in the intoxications of gastric, intestinal, hepatic,

and renal origin, and the surgical treatment of nasal affections.—*Med. Rec. Editorial*, Oct. 15, 1910.

STATUS LYMPHATICUS AND SUICIDE.—Under the caption, Pathology of Suicide, the *Hospital* notes according to an interesting contribution to the *Wiener Klinische Wochenschrift* by Dr. J. Bartel, there is a close association between suicide and the *status lymphaticus*. His attention was drawn to the matter by observing this condition in three autopsies he carried out on suicides. The subjects were a young man aged eighteen and two young girls aged nineteen and twenty-one. All had enjoyed apparently good health, and in each case there were well-marked signs of lymphatism, including considerable hypertrophy of the thymus gland. A further study of the subject is based upon 122 autopsies of suicides, of which sixty-seven were male and fifty-five female. The most constant anomalies were relative to an exaggerated development of the thymus and the lymphatic systems, and this was especially marked in the young subjects, so that in the majority of cases in this category there was present an actual *status lymphaticus*. Other points noted were a deficiency in the development of the arterial system in proportion to the size of the individual, and a frequent colloid degeneration of the thyroid gland. The ovaries were almost always large, and usually showed the presence of numerous follicular cysts. Anomalies in development were also common.

NEURO AND HEMO-DIAGNOSIS.

LEUCOCYTE COUNT WITHOUT A MICROSCOPE. By Sterling Bunnell, J. A. M. A., says: His method is to draw the blood into a pipette, dilute with acetic acid and place a drop in the Zeiss counting chamber in the usual way. Hold the cover slip on the counting chamber with a rubber band, chamber to the light and the corpuscles will not slide across the field. The counting is done with a small pocket hand lens.

A single frosted electric bulb gives the best light, but a lamp or most any single light will do. The knack of seeing the corpuscles and lines well enough to count them lies in holding the counting chamber and lens absolutely steadily in focus. This is easily done by grasping both with both hands so that the same fingers are in contact with both the lens and the counting chamber, thus preventing any tremor between them. Hold to the light and count. Occasionally a counting chamber is found on which the lines are not sufficiently distinct. The acetic solution should be filtered. It is easy then to tell white blood corpuscles from platelets. The reds cannot be counted in this way.

NEURO-EUGENICS.

MEDICAL REASONS FOR DIVORCE.—Some medical witnesses have appeared recently before the Royal Commission on Divorce, but there is a member of the profession whom we have no expectation of seeing under examination. If only in view of his German reputation as an authority on sex, Mr. Havelock Ellis should have been called. We have said his German reputation; for indeed of his latest book, *Studies in the Psychology of Sex*, Vol. VI., *Sex in Relation to Society*, which appears almost simultaneously in America and Germany, no English edition exists. It is the concluding volume of a series, and from the postscript we learn the fact, told of in words of dignified, quiet resentment, that after the appearance in this country of the first volume a Government prosecution put an end to the sale of the work. Although British officialdom and British public opinion have many good qualities, the lack of prudishness is not one of them. In many instances a wrong verdict on their part results in no great harm, but when the pursuit of knowledge comes to be interfered with things are different. Just now in the political world the intense industry of Germans in this respect is being held up to admiration: scholars and scientific men of every kind have long known of it in their various departments. To take a cognate example, there are at any

rate two German scientific periodicals devoted solely to the advance of knowledge on sexual matters. It seems unfortunate that from his own country, where are none too many such, a student of rare industry and power of expression should be, as it were, banished.

The author's views on medical reasons for divorce form, of course, but a small part of his treatment of the subject of divorce itself. The German Code of 1900, as Dr. Mott stated in his evidence, grants divorce for insanity, and presumably this can be obtained also in Russia and in Switzerland, since these countries permit divorce respectively by mutual consent and for "circumstances which seriously affect the maintenance of the conjugal tie." Monaco expressly grants it for such reasons as alcoholism, syphilis, and epilepsy. In Norway and Roumania, too, the law is liberal, as is certainly also the case in some of the United States and also in Transylvania. In New Zealand habitual drunkenness is a valid ground. A fairly common medical opinion is represented by the view of Dr. Woods Hutchinson, who argues that when there is epilepsy, insanity, moral perversion, habitual drunkenness, or criminal conduct of any kind, divorce is for the sake of the next generation, not only permissible but imperative. This is, of course, the eugenic argument, and it is not so hard on the individual as might appear to a layman, because in insanity at any rate childbirth is a common cause of relapse. It is a little startling to find Mr. Gladstone not altogether opposed. "We have," he said, "many causes more fatal than adultery to the great obligation of marriage, as disease, idiocy, crime involving punishment for life." The author's own view includes the less in the greater, for he sums up by remarking: "There seems little doubt that the modern movement for divorce must inevitably tend to reach the goal of separation by the will of both parties, or, under proper conditions and restrictions, by the will of one party." This, however, is going beyond our subject.—*Editorial in "The Hospital."*

NEUROPATHOLOGY.

MIGRAINE.—In migraine there is undoubted evidence of abnormal vaso-motor action. Chilliness of the skin is common, and the temporal artery is hard and contracted. Relief of the pain often attends compression of the carotid artery. This and the fact that pain in the head is of a throbbing character suggest that the old explanation of the vasodilatation of the cerebral vessels is correct. The brain tissue itself is insensitive, and Harvey Cushing has noted that, after excision of the Gasserian ganglion, any subsequent headache is only felt on the side of the intact nerve—an observation which indicates that intra-cranial pain is experienced via branches of the fifth nerve to the membranes of the brain. Dilatation of the vessels with resultant increased tension in the dura would be enough to account for the pain in migraine.—*Dr. A. E. Russell, in the Hospital.*

GOUT.—It is certain, first, that the peccant matter of gout is produced within the body, and is thus autotoxæmic, not entering infectively from without; and, secondly, that the subject of gout, either by inheritance or acquirement, is so far peculiar in his constitution that he reacts differently to various agencies, such as climate, food, etc., from persons not so disposed. The metabolic reactions of the gouty are abnormal. Many of the methods in practice relating to diet and therapeutics fail to regard the patient in a proper light, and all the efforts to set him right are directed against the perturbations of uric acid. This constitutes a radical fault in practice.—*Sir Dyce Duckworth, in the Hospital.*

CELLULAR TENACITY AND PATHOLOGY.—We abstract from Stedman's Editorial in *Med. Rec.*, Aug. 27, 1910, the following:

The problems of disease are ultimately resolved into problems of cytology. The specific energies of the cells confront one at every step in the investigation of pathological phenomena, whether of metabolic or zymotic origin. The

conception of specific energy as first applied by Johannes Mueller in 1826 to the nerves has later expanded to include every form of vital unit, and coupled with Virchow's doctrine of cellular pathology, it forms the foundation of modern pathological physiology.

There is one phase of this subject that has not been sufficiently emphasized, namely, the inherent tendency of all cells to persist in a given form or direction of activity. The expression, "cellular tenacity," is applied to this phenomenon by W. von Leube, in a valuable contribution in the *Zeitschrift für klinische Medizin*, Vol. 70, Nos. 5 and 6. This observer notes that as the result of certain injurious influences a quantitative change in the normal cellular activity is usually the sole expression of the disease process. Qualitative changes in cellular activity are extremely rare, and are to be attributed to persistent and unusual stimuli causing intracellular atomic rearrangements. These are accompanied by qualitative transformations of the normal activity of the cells. Of eminent importance is the fact that when once these changes are established they have a tendency to persist by virtue of the inherent tenacity of the cells.

Illustrations of these facts are amply furnished by both clinical and experimental phenomena. The formation of antibodies in natural or artificial active immunization represents a specific reaction of the cells. This immunity may exist for a longer or a shorter time; in either case the disappearance of the antibodies is not necessarily associated with the loss of those intracellular atomic readjustments that were instrumental in yielding these antibodies. A new infection, as in typhoid, excites a prompt and vigorous elaboration of these protective substances. Thus it had been shown by Cole that a minimal inoculation with a typhoid culture will not evoke the production of agglutinins in a normal rabbit, but will do so in a rabbit that had already produced agglutinins upon inoculation, and from whose blood these substances had disappeared. Furthermore, this reawakening of a former intracellular rearrangement may be evoked by other than specific stimuli. Thus, small doses of pilocarpine increase by one-third the amount of

antitoxin in the blood of a horse actively immunized against diphtheria. Prof. von Leube has investigated this phase of the subject in patients that had recovered from typhoid fever. He found that the production of Bier's passive hyperemia in the extremities, or the administration of an abundant diet, was instrumental in stimulating the elaboration of agglutinins when the tendency to produce these had already become latent. It is a fact established by both clinical and experimental evidence that the stronger the original infection the greater does this latent tendency become. It has been shown by numerous observers that when the temperature is artificially raised in animals that have been inoculated they are enabled to resist the infection more powerfully. Lüdke has found that the prolonged application of external heat may arouse the latent tendency to produce agglutinins in animals that had been inoculated with typhoid bacilli. The injection of deuteroal-bumose had the same effect * * *.

NEUROPHYSIOLOGY.

THE INFLUENCE OF THE CEREBELLUM ON THE CO-ORDINATION OF WORDS.—G. Garbini considers it demonstrated that the cerebellum exercises a co-ordinating action on articulate language. The demonstrative cases are those of Sanloeffler and U. Rosso, the last of which was confirmed by autopsy at the *Istituto Umbro*, in May, 1906. The macroscopic and microscopic characteristics were shown of atrophy and total sclerosis of the cerebellum. The authors record that the subject in life had presented a pseudobasilar syndrome, and articulated language was changed by disturbances of speech, dysarthria, dysphasia, and bradyphasia. He thinks that the regulatory mechanism is in the cerebellum, and impulses pass out by the system of cerebello-rubro-thalamic neurons, and run through the *ansa nuclei lenticularis*, and the *putamen*, to produce their regulative action. This has a marked importance in its effect on the mechanism of words, the impulse for which passes through this nucleus

by a certain number of fibers deputed to articulate language.
—*La Riforma Medica*.—*Med. Rec.*

“IS INSANITY INCREASING?”—In a country like the United States, of such a cosmopolitan people, it is necessary to know whether, relatively to the proportion each bears to the total population, the native-born or the foreign-born furnishes the larger number of the insane. The answer is, the foreign-born. That is to say, Government statistics tell us that of white individuals, at least ten years of age, in the general population of the United States in 1900, 80.5 per cent. were native born, and 19.5 per cent. were foreign born; while of the white insane of known nativity enumerated in hospitals, 65.7 per cent. were native, and 34.3 per cent. were foreign born. To a nation receiving a million of immigrants a year, such a fact is of great significance.

Aliens come to us chiefly by way of our seaports, and it is, therefore, pertinent to inquire what protection we are receiving at these points of entry.—*Dr. Amos J. Givens*.

PSYCHOPATHIC EXEMPTIONS FOR GERMAN ARMY RECRUITS.—Germany in its military department makes this advance departure from past methods or rather addition to them in considering fitness of recruits for military service, as *The Hospital* notes, as follows:

“A paper by Staff-Physician Stier in the *Berlin. Klin. Woch.* draws attention to a new departure in the processes whereby undesirable recruits and soldiers are weeded out of the German Army. It has been recognized that the possession of a psychopathic taint renders a man less amenable than the average to military discipline. Psychological methods of examination have therefore been adopted in addition to those already in use. Neurasthenia is the commonest of the psychopathic conditions and is recognized by the morbid irritability of the patient, his proneness to mental and physical exhaustion, and the possession of hyperæsthesia, headache and sleeplessness. Hysteria is characterized by inattention and lack of ideation. Traces of physical degeneration are more commonly met with than in

neurasthenia. The hysterical class should be rejected at sight, but the neurasthenic can in some cases be accepted. The epileptic tendency is shown by ungovernable temper and intolerance of alcohol. The hereditary psychopathic taint produces changes in the emotions, conduct of life and personality, and may coexist with good mental powers as well as with physical stigmata. Physical is naturally closely related to moral degeneration, and attention should be paid as much to moral as to physical stigmata. The author does not consider misshapen ears to have much practical significance as stigmata of degeneration, but on the other hand malformations of the head, dental anomalies, peculiar distribution of the hair and malformations of the genitalia are important. A disproportion between the candidate's age and his actual development is also good evidence of degeneration. Speech defects, squints, quivering of the eyelids, tics and habits such as biting the nails are taken as functional stigmata."

We commend this subject as we have in times past commended it to our army and navy. The man behind as well as the man beside the gun should be psychically stable and every where level-headed.—*Ed.*

NEUROTHERAPY.

TABLE SALT AND EPILEPSY AGAIN.—Von Den Velden (*Deut.-Zeitsch. fuer Nervenheilk.*) confirms the observations of his predecessors as to the convulsive excitation power of chloride of sodium. But no one has as yet shown whether the increase of salt in the diet or the increase of water imbibition demanded by the salt causes greater proneness to the convulsive seizure in epilepsy or whether too much and too sudden increase of water due to too much salt are at fault. It is perhaps the saline irritation of the nerve centers that makes the trouble, as alcoholics, which rob the tissues of their normal life and power of healthy actions do, bringing on epileptic seizures directly and indirectly as in the offspring.

THE INFLUENCE OF CALCIUM ON AMEBOID MOVEMENT AND ON PHAGOCYTOSIS.—Recent investigations of the influence that various factors may have on phagocytosis have revealed that certain substances under suitable conditions may stimulate phagocytosis. Thus Hamburger and Hekma found that small amounts of calcium are able to promote phagocytosis considerably by action on the leukocytes, and Eggers has shown that magnesium has a similar effect. These results were obtained from experiments with phagocytic mixtures outside the body; more recently Hamburger reports that minute quantities of calcium increase the activity of leukocytes in the living body as well. He placed under the skin capillary tubes containing bacterial cultures with and without calcium and then compared the lengths of the columns of leukocytes which entered the tubes; he also injected physiologic salt solutions with and without calcium into the intestinal canal and measured the columns of leukocytes attracted into capillary tubes containing bacteria and inserted under the skin of animals so treated. In both of these sets of experiments the results clearly indicated that the calcium increased the leukocytic immigration into the tubes; special experiments showed further that the calcium also stimulated phagocytic action. These effects were obtained not only with physiologic salt solution containing calcium chlorid, but also with a mineral water which contains a large amount of calcium; if a quantity of this water containing 0.06 gram of calcium was injected daily into the intestines of rabbits the number of leukocytes entering the tubes increased about 40 per cent. above that observed in untreated animals.—*Jour. A. M. A.*, Oct. 15, 1910.

THE ULTRA-VIOLET RAYS.—By Dr. H. Bordier, in the *Lyon Medical*, by a special apparatus finds that alcohol and chloroform are more opaque to these rays than water and in regard to colloidal substances, such as gum arabic, gelatine, and albumin, their opacity is inversely proportional to the amount of water they contain. Metals in the colloidal state completely arrest the ultra-violet rays. The organic fluids vary in their transparency. Cerebrospinal fluid is a

little more opaque than water, pleuritic fluid more so, and milk and urine completely arrest these rays. In regard to the tissues of the eye, vitreous humor is as transparent as water. The cornea arrests a large proportion of the rays, thus protecting the deeper parts of the eye. The crystalline lens is completely opaque to these rays. It becomes fluorescent under the influence of these rays and in fulfilling the duty of protecting the retina in this way the author suggests that it may itself suffer from their action, resulting in the early production of cataract, as in the case of glass-makers and founders. Eyes operated upon for cataract and in consequence deprived of their natural powers of defence should be specially protected against the action of the ultra-violet rays. The author points out further that such lights as the arc lamp, the Auer light, and the mercury vapor light should only be used for large spaces. On the other hand, the work table or desk should be lighted by the oil lamp or electric bulb, which are very feeble in ultra-violet rays. He further observes that the dust and smoke in the atmosphere of towns occlude these rays. Hence sunstroke is rarer here than in the country and on mountains. He suggests that the tonic effects of country air are due to the same cause.—*Abstracted and condensed from the Hospital.*

THE EFFECTS OF RAPID AND PROLONGED DEEP BREATHING are described in "Science" (Dec. 31, 1909), by D. F. Comstock, of the Massachusetts Institute of Technology. They are sufficiently startling to warrant more attention from physicians, for he truly states that though they are well known in a general way, scientists as a rule are ignorant of the matter and that there are many occasions in which the process can be put to valuable uses. Briefly, it may be explained that the blood is thus so supersaturated with oxygen that all the functions are stimulated to greater activity and respiration can be suspended for three to five minutes. Consequently, there is a rise of the pulse rate, mental fatigue is lessened, sleepiness disappears and muscular power is greatly increased as in the case of oxygen inhalations of athletes. These results follow deep respirations of less

than four minutes. Pearl divers practice the methods and stay under water five minutes or longer, but as they are notoriously short-lived, we must warn against the dangers lest the method might be adopted by swimmers to their ultimate ruin. It is the ordinary method of respiration of whales, but they have evolved lungs which are not strained by one very deep inspiration which supplies enough oxygen for many minutes. Yet it is a good thing for swimmers and firemen to know, when rescue work demands a cessation of respiration for some minutes even at some risk. —*American Medicine.*

THE DIFFERENCE BETWEEN MORPHINE AND CODEINE AND HEROIN.—A short time ago the Board of Health of the city of New York, promulgated an ordinance providing that "No cocaine or salt of cocaine, and no morphine or salt of morphine, either alone or in combination with other substances, shall be sold at retail by any person in the city of New York, except upon the prescription of a physician." Immediately every druggist in the city stopped the sale of all preparations containing any derivative of opium and raised such a furore, that the Acting Commissioner of the Board of Health felt called upon to explain what every druggist ought to have known, viz.: that "Heroin and Codeine are not salts of morphine, and therefore are not included in the proscribed list."

In order to make this matter perfectly clear, the following on the subject of opium is submitted for the information of the many who have been laboring under the misapprehension that Codeine and Heroin are salts of opium or of morphine.

Opium, besides wax, fat, glucose, gum, pectin, resin, etc., contains about 20 alkaloids, among them being Morphine, Codeine, Thebaine, Narceine, Papaverine, Pseudomorphine, Narcotine, etc., all occurring in varying amounts according to the grade of opium. While Morphine is an analgesic, it does not follow that Trebaine is an analgesic simply because it is also derived from opium. One might equally as well say that Acetanilid and Diamond Dyes have similar therapeutic effects, because both are derived from coal tar. Heroin, as is well known to every druggist, is a

synthetic preparation and is not an alkaloid of opium. There are no salts of opium; there are active principles or alkaloids from which, by the addition of acids, salts are formed, which become, not salts of opium, but salts of morphine, salts of codeine, etc. All chemists know this and all druggists probably know it, but fear of transgressing the law made the New York druggists take a position contrary to that which their knowledge of chemistry would indicate to be the correct one. Codeine and Heroin are not salts, either of opium or of morphine, the one being an active principle, and the other a synthetic compound. Furthermore, Morphine and Codeine have widely different properties; Codeine being entirely devoid of the evil effects of Morphine, not locking up the secretions or causing constipation; and the Codeine habit is a thing unknown in medical literature. In fact, all authorities agree that Codeine does not create habit.

From all the above we glean the following facts:

1. Opium and derivatives of Opium, except Morphine and its salts are not in the proscribed list under the Regulation of the New York Board of Health.
2. Codeine and Heroin are not salts of Opium.
3. Codeine and Heroin are not salts of Morphine.

—*Apothecary and New England Druggist*, Oct., 1910.

We take pleasure in inserting this abstract for both commendation and criticism. Heroin and Codeine are certainly preferable to morphia and though not opium salts they are of meconic extraction. They are preferable by far to the salts of morphia but codia used excessively will entail the opium habit, though not so readily, and both codeine and heroin are preferable to morphine in many ways, especially in having less controlling power over intestinal peristalsis and consequently less constipating.

THE WASSERMANN REACTION IN PSYCHIATRY AND NEUROLOGY. Felix Plaut. (*Zeitschrift für die gesammte Neurologie und Psychiatrie*, Bd. 1, Hft. 1.) Bernard Gluck, Gov. Hosp. for the Insane, Washington, D. C., in *Periscope of Jour. Nerv. and Ment. Dis.*

The author gives a résumé of the work done in this line

during the past year. He first reviews the various new modifications in the technique, mentioning those only which come under the complement-forming group. The methods outside of this group have practically fallen into disuse. After discussing the various modifications he comes to the conclusion that it is safest to adhere to the classical Wassermann method. He dwells on the difficulties one meets in attempting to sift through the literature on the subject in a critical manner, chiefly because of the variety of methods used by different investigators. After discussing the specific value of the reaction in the different diseases in which it has been employed, the author comes to the following conclusion:

The positive reaction of the blood to the Wassermann test cannot of itself establish the existence of a metaluetic or luetic affection of the central nervous system. It only shows that the patient suffers from syphilis.

The negative finding of the blood plays a more decided role as a single symptom. It establishes once for all that there cannot be a great suspicion of general paralysis; also, the existence of cerebrospinal lues becomes highly improbable in the absence of positive Wassermann, but here it behooves one to be careful before a positive statement is made. We cannot positively exclude tabes because of a negative Wassermann finding. It seems, however, that tabetic cases which show a negative Wassermann consist in the majority of instances of the stationary form of tabes. Therefore it is not at all unlikely that we will be able to say in time, that where it concerns a fresh case of tabes, we shall expect to find a positive Wassermann reaction of the blood, and that in the presence of the negative Wassermann it is highly probable that we are not dealing with a tabetic process.

The positive Wassermann reaction of the cerebrospinal fluid is unquestionably of the utmost importance. It establishes once for all that there is a process going on in the central nervous system, which is closely allied to syphilis (a metaluetic process.) If the central nervous system is not affected by such a process, then the cerebrospinal fluid is free from the Wassermann reacting substances, no matter how positively the blood may react. The positive reaction

of the fluid is almost absolutely confined to the metaluetic cases, while patients with true syphilitic lesions of the brain or cord never, or only in very rare exceptions, show a positive reaction in their fluid. True luetic lesion of the central nervous system cannot therefore be differentiated by means of the Wassermann reaction from cases of general syphilis with an intact central nervous system. The existence of paresis or tabes is almost positively established in the presence of a positive Wassermann reaction in the fluid. A Wassermann negative finding of the cerebrospinal fluid makes the existence of paresis highly improbable, because the percentage of cases of paresis with a negative cerebrospinal fluid is very slight. However, a positive finding of the fluid speaks stronger for than a negative does against paresis.

When in the absence of a Wassermann reaction of the fluid the differential diagnosis between tabes and paresis is in question, one should be inclined more towards tabes.

OSTEOTOXICOLOGY.

“PHOSSY-JAW.”—*The Hospital* says the United States is practically the only large commercial country that has made no legislative effort to prevent the use of the deadly white phosphorus in the manufacture of matches. It appears that few safety-matches are made in the United States, and that these are produced by a single company possessing patent rights. Most of the matches in common use are made of white phosphorus which, as might be expected, exacts its toll of victims from among workers in the match industry. J. B. Andrews, of the American Association for Labor Legislation, found forty cases of “phossy-jaw” recorded as occurring in one of the best factories. In three others eighty-two cases were reported. It is obvious, therefore, that legislation, is urgently necessary to cope with this evil. The extra cost which would fall upon the manufacturers by the use of a form of phosphorus free from the poisonous qualities possessed by the white variety, would not, it is computed, exceed 5 per cent. In view of the cheapness of matches in

this country where the use of the safe variety of phosphorus is insisted upon by law, it could not be deemed a great hardship to the public of the United States if the increased cost of manufacture were reflected on the consumer by a slight rise in the retail price of matches. It would seem that the company possessing the patent rights of manufacturing safety matches has offered to place them at the disposal of the other companies, providing that the United States Government prohibits the use of white phosphorus in the industry. While this concession is no doubt made largely on commercial grounds, justice to the workers demands that it be accepted and that the cost of manufacture should be thrown upon consumers and not upon the health of the work people. As the *American Journal of Surgery* says, "it is regrettable that this objectionable loss of workers cannot be stopped at once by a country that is so willing to listen to cries against vivisection."—*The Hospital*.

The manufacture of these matches is being abandoned in the U. S.

PREVENTIVE PSYCHIATRY AND NEURIATRY.

Before the American Public Health Association, Thirty-Eighth Annual Meeting, held at Milwaukee, Wisconsin, Sept. 6-9, 1910.

SYMPOSIUM ON MENTAL CONDITIONS.

THE PREVENTION OF MENTAL DEFECTS AND MENTAL DISEASES.—Dr. William A. White, Washington, D. C., spoke as follows: The practical things that may be done at once in any community are these: 1. Legislation should be secured placing the responsibility for the care of the insane previous to commitment in the local health office. 2. Every city of 100,000 inhabitants, or over, should have a psychopathic ward connected with its municipal hospital, which is as accessible for the mental case as the other wards are for general medical and surgical cases. This ward should have an out-patient department. 3. An after-care society should be organized to assist persons who have been dis-

charged from a hospital for the insane to get on their feet and to point out to them ways of avoiding the conditions which led to their breakdown. 4. Adequate laws should be passed for the control of the labor of women and children. 5. There should be a campaign of popular education. By the use of this term I am not merely dealing in a glittering generality that may mean nothing or everything. We have in this country nearly 200 state hospitals for the care of the insane. Each of these hospitals should be a center of information for the community in which it exists, and its medical officers should use their positions to spread information about mental disorders. The superintendent, or a member of the staff, should deliver one or more popular lectures each winter to which the public should be invited. Much might be accomplished in this way if all hospitals would do this. 6. Field work should be carried on from the state hospitals and psychopathic wards as centers to study conditions under which insanity has developed, to furnish assistance to the hospital in dealing with its patients, and to co-operate with the after-care society. 7. More liberal support should be given by city and state for scientific research work in this field, especially along the lines of etiology and prophylaxis.

PREVENTION OF FEEBLE-MINDEDNESS.—Dr. E. R. Johnstone, Vineland, N. J., said: Two or three states have passed laws authorizing the unsexing of degenerates after they get into institutions, but please note that these individuals must get in the institutions first. I heartily approve of the operation of castration and merely agree to vasectomy and salpingectomy. After these operations have been performed a fair percentage of the patients may be returned with safety to their homes, and thus make room for others in the institutions, but the ideal way is to gather all the feeble-minded into institutions, and train them in so far as possible to be self-supporting—plenty of industrial occupation and very little academic training. From 30 to 50 per cent. can be made entirely self-supporting after 10 years' training. Take the women of child-bearing age first and teach them to raise and can small fruits, raise poultry and

garden truck, knit underwear, weave rugs, carpets, etc. Then take the others as young as possible and the economic problem comes close to solution. But do not talk—get to work. The numbers are increasing. If they are not cared for in well-conducted training schools, where they may learn to contribute toward their own support, they must be kept in almshouses, reformatories, prisons and other institutions, and when they are led in to evil ways the taxpayers pay for their arrest, their trial and the damage they have done. If feeble-mindedness is to be checked, physicians personally must do something.

PREVENTABLE NEUROSES.—Dr. C. H. Hughes, St. Louis, spoke about the prevention of the neuroses which underlie the physical, the moral and the mental integrity of the people, and which, if not considered and timely regarded, will eventuate in degeneration and degradation of our people, such as have visited the people who have gone before. The neuroses constitute the bane of our civilization. It was the neglect to care for a neurosis that caused the greatest of human generals to fall. It was a neglected epileptoid condition that may have caused Napoleon Bonaparte to lose the battle of Waterloo. As physicians we are for prevention of the neuroses, those conditions of mind and of the nerve centers that have so much to do with the individual in the community, with the individual on the firing line in the battle of life, and with the individual who has to meet the duties and obligations of our modern civilization, with its strenuous demands, in order to conserve the vitality of the race and save America. We must prevent neurosis because they are the bane of civilization; they are the bane of the family life; they are the bane of social life. The incongruities and unhappiness that exist in families and revealed so largely in the divorce courts are the product on one side or the other, and often on both, of the dominance of the neuropathic element in one or the other, or both members of the family. Lawyers speak of incompatibilities, but these individuals are instances of neurotic ill-adaptability. They are psychological misfits. By neuroses I mean not alone functional conditions

of the nervous system, because the line of demarcation between functional and organic disease is only a question of time and of study and further observation, but the functional affections of yesterday which are the organic troubles of to-day. The time is coming when we will understand hysteria to be an organic disease. Insanity comes down to us in its predisposing element in the majority of instances as an inherent predilection, an inherent organic tendency, and superadded to its comes the disturbance or influence of environment, the disturbing influences of depressive passion, the influences of conditions of over-strain, over-worry, which over-annoy the human mind. We should have a reasonable regard for the powers of the growing child, so that he may not be over-strained. He should have an adequate amount of fresh air, abundant nutrition, ample time for rest; and the prevention of those conditions which come from excesses is the cardinal principle which underlies the prevention and evolution and final destructive development of all neuroses.

IN THE DISCUSSION ON MENTAL CONDITIONS.—Dr. John N. Hurty, Indianapolis, said: What if we do save a child from diphtheria or scarlet fever, and yet fail to save it from some neurosis? The child is lost just the same. The longer I live and work in the science of hygiene, the more I am convinced that it is hopeless to work with the adult. We must go back and instruct the child; that being done we have taken the first step. Under our present form of education we do not do that except to a limited degree. The thought is gradually penetrating our minds that the child must have playgrounds and fresh air. We have been shutting out the air from the school room and calling it economy. We have been buying sites for school houses without playgrounds, and calling that economy, and it is the worst kind of extravagance. Something must be done to prevent the building of insane asylums, taxing the people, raising the rates, and having insane on every hand, and the way to do this is to begin with the child.

Dr. Henry A. Norden, Sturgeon Bay, Wis.: Aside from trying to make a living in the practice of medicine, I have

been riding a hobby—the education of children. Neurotic conditions are superinduced by night studies on the part of children. Do not blame the teachers; do not blame the school board, but blame the people who are behind them and have them prevent the school board from doing what they should do. It is absolutely necessary, considering the way education is carried on to-day, for the child to study at night or to sacrifice the playtime of the day. It is almost impossible for children to study in school while one section of the school room is reciting. I have suggested frequently in my work that the number of hours of school sessions be cut down; that we use the school session for the recitations and explanations, and allow a part of the day to be used for pleasure and part for study. In that way we can prevent neurotic conditions that are produced by night studies.

Dr. E. C. Rogers, Faribault, Minn.: Wherever there is a family with two feeble-minded children, that family ought to be studied carefully, its ancestry gone into, and the mental condition of these children studied carefully, and from the work that is now being carried on we hope to have data which will give us the facts necessary to make statements as to what shall be done toward prevention of feeble-mindedness.

PSYCHIATRY.

MODERN METHODS IN CLINICAL PSYCHIATRY.—The medical profession in general has only the vaguest conception of the high order of clinical and pathological work that now-a-days is being done by its members in many hospitals for the insane. This is nowhere better exemplified than in the report of Dr. Kirby, the “director of psychiatry” (a recently made position) of the Manhattan State Hospital. * * *

In his analysis of 1,152 new admissions it is especially pleasing to note the progressive tendency toward intelligent study of the case as a whole, toward placing more and more

emphasis upon both the disturbing causes directly responsible for the initial outbreak and upon the natural make-up and normal tendencies of the individual, thereby obtaining an insight into the real nature of the condition which could never be attained by the closest study and observation of the clinical symptoms alone. Following upon the general adoption of Kraepelin's classification, many cases were, with surprising ease and nonchalance on the part of the diagnostician, at once labelled dementia precox because of catatonic symptoms, conduct disorders and the like which are now being given more serious study, especially as to the evolution and general setting of the symptoms, and are classified more intelligently. As a result there has been a progressive shrinkage in the adoption of the unqualified diagnosis of dementia precox as appears in the following table:

	Per cent.	Per cent.	Per cent.	Per cent.	Per cent.	Per cent.
	1904.	1905.	1906.	1907.	1908.	1909.
Women,	31.8	28.6	23.3	20.7	15.3	12.9
Men,	—	—	24.7	17.4	18.1	17.5

That is to say, in 1906 24 per cent of new admissions were diagnosed dementia precox, whereas in 1909 15.2 per cent were definitely classified as such. While awaiting developments of diagnostic importance, 4.3 per cent of admissions were classed as "allied to dementia precox," with 65 per cent of recoveries. These for the most part were made up of patients who, because of negativistic or catatonic tendencies, were inaccessible to satisfactory examination or about whom nothing was known relating to the development of the signs and symptoms of mental aberration. In support of this temporary grouping is the fact that in certain instances definite manifestations occurred later on during the disease which denoted that the case properly belonged in the manic-depressive group.

3.4 per cent of cases were appropriately classified under the heading of "paranoic conditions." In such patients the mental symptoms developed at about the fortieth year of life and were characterized both by systematized and dementia precox-like delusions, having in most cases a fairly definite factor, in the shape of some special troublesome

experience, for the instigation of suspicious ideas, faulty reasoning power and errors in judgment, eventually leading to delusion-formation. Because of the frequency with which such cases are met, a special classification seems expedient. Although they develop later than does dementia precox of the paranoid form, and deteriorate slowly or not at all, they nevertheless do not progress to a definite, expansive system of delusions as in true paranoia.

Fourteen cases (or 1.3 per cent) were classed as "depressive hallucinosis," the clinical picture of which is acute depression, prominent hallucinations (especially auditory) with clear sensorium. Thirty-eight cases (3.5 per cent) of admissions were placed in the group of "depressions undifferentiated," inasmuch as certain features were lacking which would allow their identification with any of the better known forms. This practice of withholding a definite diagnosis in certain cases which do not conform to a special clinical type, meanwhile giving such case a term somewhat descriptive, for example, "depressive hallucinosis, "allied to dementia precox," etc., should lead eventually to a more perfect classification of mental diseases.

In the report of the pathologist, Dr. Rusk, a noticeable feature is the striking predominance of bronchopneumonia as the terminal infection in general paralysis. It is not recognized clinically in most instances because of the difficulty experienced in making a thorough physical examination in the end-stage. Of thirty cases autopsied, as many as 93.3 per cent showed fatal lung involvement. In the 1906 report of the Massachusetts State Board of Insanity only 14 per cent of paretics in our state hospitals were said to have died from this complication and other pulmonary lesions. A comparison of the two percentages tends to substantiate the claim of general difficulty and error in determining clinically the exact cause of death in such cases.

In addition to the daily staff meeting, a weekly conference is held at the Manhattan State Hospital for review of all cases coming to autopsy, at which time anatomical material of interest is displayed. * * * —*Boston Medical and Surgical Journal*.

LIBIDOGENE AND SEXUAL EXCITABILITY IN AGED MEN.
By Franklin R. Wright, M. D., of Minneapolis, Minn.

At the last meeting of the American Medical Association, Dr. J. F. Percy, *Journal of American Medical Association*, July 2nd, 1910, of Galesburg, Ill., read a paper entitled, "Phrenitis Prostatica," in which he attributed the sexual excitement, which occasionally occurs in men of advanced years, to an inflammation of the mind due to some change which has taken place in the prostate. He states that the symptoms which these men present, "have back of them as yet an undescribed pathology," and directs attention to this undescribed pathology.

He thinks it is certain that the sexual centers in the cortex of the brain are stimulated by impulses, which originate in the genital organs, and that the intensity of the stimulation depends on the normal or pathological condition of these organs. Dr. Lewenfeld, *Sexual-Leben und Nerven-Krankheiten*, of München, says that this cortical stimulation is not due simply or chiefly to mechanical irritation (pressure and stretching), in the peripheral genital organs, but to chemical substances in the blood, which are produced chiefly, but not entirely, by the testicles. This substance he calls libidogene.

BRAIN FAG "SPOONERISM" APHASIAS.—*The Christian Register* gives the following in its comical column: Col. Roosevelt's host at New College was the famous Dr. Spooner who has given to the English language the term "Spoonerism." A Spoonerism consists of the transposition of the initial letters of two or more words in the same sentence. Once, when he wanted some stewed figs, he electrified a luncheon party by asking a lady to pass him the pigs' fleas. Those who know the doctor would understand at once that he was merely asking for "the figs, please." In chapel it is recorded that he has read out the first line of the well-known hymn which starts "From Greenland's icy mountains" as "From Iseland's greasy mountains," and has spoken of the wicked men whose words were "as ears

and sparrows." His description of his baggage to a railway porter as "two rags and a bug" was simpler.

DANGER SIGNALS IN YOUNG CHILDREN.—We are learning that all the so-called naughtinesses of children may be merely danger signals indicating disturbance somewhere. Laziness may be a symptom of anemia or neurasthenia. The speaker made particular mention of a great number of symptoms of nervous disease, including even hysteria. Children's lies are a separate chapter altogether. Many conditions are danger signals not so much in the development of the child himself, but in the manner of his education. The wisdom and judgment of the educator are in question when all is told. Parents, as a rule, are sadly deficient in the wisdom and training required for the education of their children. No man or woman should be considered fit to marry who cannot give evidence of a training in parental functions.

If it is our desire to make a more detailed study of danger signals, we must first train ourselves so as to develop the observational attitude of the diagnostician, and to consider everything as a symptom which we cannot readily explain. And for every symptom we must train ourselves to look for a cause.

The speaker designated the normal type as one in which all functions are in proper poise and in which all potentials of the complete man or woman are present and in unimpaired growth. He referred to possible discrepancies between the chronological, anatomical, physiological and psychological age of a child, which may cause a tension fraught with danger. He spoke of a number of tests by means of which the actual age of a child in body growth and mental development may be established so as to secure for him a proper recognition of his needs. In this connection he referred to measurements of height and weight; to Prof. Rotch's X-Ray pictures of the bones of the wrist; to tests measuring the special senses; to speech defects and left-handedness; to a number of disease symptoms which should be readily detected; and to the measuring scale for intelligence suggested by the Italian Professor de Santes and the

French psychologist, Binci. Family histories will add to the completeness of desirable data.

He closed with the expression of a hope that all teachers and parents may learn to consider themselves students of child nature rather than tamers and drill-masters of children.

By Maximilian P. E. Grossmann, Ph. D., Educational Director of the National Association for the Study and Education of Exceptional Children.

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EDITORIAL.

[All Unsigned Editorials are written by the Editor.]

THE RIGHT AND WRONG KNOWLEDGE TEST OF INSANITY.
—This magazine has on other occasions both editorially and through contributions of expert alienists of wide experience controverted the legal "knowledge of right and wrong" test of mental aberration, but the courts have not yet so profited by scientific testimony that the fact may not be yet often told to jurists and the legal fraternity generally. Accordingly we quote again from a source of experience on this subject.

"As alienists we can hardly accept this "right and wrong" test as regards responsibility for crime. But as this is the law of the State of New York, and in many other States of the Union, we are obliged to abide by it. In fact, as experts, we have nothing to do with the law. Our function is simply to determine, if possible, the mental condition of the accused at the time the act was committed—a purely scientific question. Now every alienist knows perfectly well that this so-called legal definition is unscientific and way behind the age, and that, in

this matter, the law has not kept pace with the progress of medical science. Those who are familiar with the phenomena of mental disease know perfectly well that in a large majority of cases in which the plea of insanity is offered as a defense to an indictment for crime the accused knows the difference between right and wrong in the abstract—large majority of the so-called “dangerous” or “criminal insane” being paranoiacs. We know that paranoiacs as a rule converse coherently and plausibly and that they reason logically respecting their delusional ideas, but that they always reason from wrong premises, the mental condition being one of gradually developed delusional ideas of the systematized variety, without marked mental deterioration or clouding of consciousness. So that, in most cases, with us the question is, not whether the individual knew the nature and quality of the act he was doing and knew that it was wrong, but whether he had the power to control his act and to resist the impulse to do the wrong, or whether he was actuated by delusion which supplied the motive, impelling him to do the act.”—Dr. C. F. MacDonald before the Medico-Psychological Assn., May 10, 1910.

The following quotations reflect like a psychologic mirror the consensus of opinion of all who really know by clinical experience what should really constitute exemption from responsibility before the law on the ground of insanity.

“The true test of irresponsibility,” says Forbes Winslow, “should be, not whether the party accused is aware of the criminality of his actions, but whether he has lost all power of control over his actions.” “Make the man’s power of controlling his actions the test,” says Clouston. “With that view every medical man will agree.”

TO REPEAT AND IN CONCLUSION to be more emphatic and specific as to the eugenic remedies: they are physiological conjugal selection, the avoidance of pathic parentage for the prospective child, the building of the normal neuraxes through both healthy conjugal unions, healthy rearing and environmental influence. The prevention and sequestration and surgical remedy of the matrimonially unfit and such other

safe and sane agencies to avert the evolution of psychophysical defects as would suggest themselves to the rightly endowed alienist and neurologist. The obvious surgical remedies are oophorectomy, vasectomy, testicular obliteration, etc., etc.

"TOO MANY DOCTORS?" No! NOT ENOUGH of the right sort for the necessities of the country. The Carnegie foundation report is mistaken and we need medical not commercial optometrists all over the land.

The new asylums for the insane of the country are constantly in need of medical, not political, alienists and the schools should teach psychiatry to the new students notwithstanding the Carnegie Foundation has not recommended psychiatric chairs in medical colleges.

We need more and better toxicologists—neurotoxicologists among doctors—one of our brethren is now in jail convicted of murder by poison because of lack of right toxicological and toxiconeuropathic knowledge among the profession at large. A universal protest against Dr. Hyde's conviction for the suspicioned crime of poisoning an old arterio-sclerotic suprarenal capsule diseased man, with cyanide of potassium, who took the unprecedented time of a day in dying when there is no record of any one living longer under this poison than an hour and a half, should be made.

Not enough doctors yet for the demands of school, hotel, home, transportation, city and personal hygiene. Doctors of medicine should be employed more as health counsellors and to aid in preventing the culmination from the beginning incipient symptoms than now are.

The people need medical advice and often treatment earlier and oftener than they seek it and require it longer generally, especially in neuropathic, anaemic and cancerous precursors. The neglected choreas, epilepsias and neurasthenias of children are pitiable and a reproach to medicine as well.

MAY A PHYSICIAN EVER LEGALLY POISON HIS PATIENT ON SOLICITATION?—Although it is the custom to poison

domestic animals "to put them out of their misery," or when so maimed as to be no longer of use to man, an incurably sick person does not thereby forfeit his right to live and it is tyrannous cruelty to take that life, even on request of the suffering, mentally maimed by pain and who might not wish to die if rightly relieved, as may be done in all cases, in these days of enlightenment through anodyne therapy. Yet a professor of an eastern college proposes to deprive such persons of life by poison and a case has come to light in Europe, in nineteen hundred and ten near Budapest, Hungary, the doctor being accused of murder. The record by cable is as follows:

Dr. Joseph Fekete of Rosinjo, Hungary, admits having given poison to a patient at the latter's request.

The victim had endured appalling suffering for 10 years, and his malady being without remedy and probably likely to entail many more years of torture, the doctor administered poison with the full consent of the family, who were assembled at the bedside. A nurse maid had been listening at the door, and on her evidence Dr. Fekete found himself charged with the capital offense.

This matter is reported from Budapesth as without precedent in Hungary. It is probably so in the United States.

JURIDICAL CARDIAC HYPERTROPHY.—The conductor of a freight train of the I. M. & S. railway called an Illinois doctor to attend an injured passenger.

The man, unconscious from his injury, appeared so seriously hurt that the doctor (W. C. Isom by name) stayed with the injured man thirty-six hours.

An exuberantly sympathetic jury, struck with enlargement of the heart, munificently awarded the faithful physician fifteen dollars for his service.

A St. Louis plumber would charge two hundred and sixteen dollars for that much time and he would have received it, if there were enough union plumbers on the jury to take care of the craft. But the jury must have been reading Mr. Flexner's Carnegie Foundation report and discovered what a

sorry lot of physicians American doctors are from this layman's view.

THE UNSTABLE NEURONE AGAIN. HAZING CAUSING DEATH AND DISEASE.—This magazine can not find space enough in its columns to record and denounce all of the barbaric inhuman practices which show the deceptive veneer and crime of omission in our educational methods, wherein the brain is crammed and the training of the higher and nobler heart sentiments thereof are neglected.

The last note on this beastly barbarism in these pages referred to an eastern seminary for ladies—God save the mark—but the following note is nearer the home of the *Alienist and Neurologist*. Last March several young men students of the White County, (Indiana) school caused the hazing of Charles Stintson, a student, whose death followed.

Stintson was taken to a tree near the school building and strung up by heels, it is alleged, and while dangling in the air, frantically trying to reach the ground, his tormentors stood by and chided him. The hazers left after a time and an hour later Stintson was found unconscious by a passer-by.

He did not regain consciousness and died without being able to make known who had hazed him.

Of what use is education when it breeds the torturing, killing savage or does not eradicate the brutal propensities, but fosters cruelty and adds to disease and death?

PATRICK CONVICTED ON VULNERABLE TESTIMONY.—The Medico Legal Society of New York asks for the pardon of Albert T. Patrick, serving a life sentence for the murder of William Marsh Rice in that city some years ago, on the ground that Patrick was convicted on medical testimony that embalming fluid introduced into a body through the right brachial artery would not enter the lungs, but which testimony has since been demonstrated wrong.

There is yet another objection to the verdict of the Patrick jury, viz.: It was testified that a chloroformed cloth was applied but once over Rice's face while he was asleep and left there.

Now such an application of an anæsthetic like chloroform or ether, unless the victim were comatose and probably dying, would most likely excite irritation and movement and turning away of head, the usual first effects of initial anæsthesia, thus aborting the anæsthetic purpose.

Patrick was convicted on an unscientific suspicion.

TEACHING STUDENTS.—For the remedy, relief and rescue work before the student preparing for the practice of medicine more stress in teaching him well should be put upon the imparting of essential knowledge and mind habit for right reasoning and appliance of therapeutics for the patient's benefit, than for skill in biological laboratory manual work.

This is largely delivered over, to-day in the best independent medical schools, to men specially skilled and occupied in laboratory manipulation and research. Men who have chosen to relinquish in large measure, or entirely, the practical bedside work and serve the profession as consultants, having seen and done some practice and acquired clinical habits of thought and biological application and logical weaving into diagnosis and therapy, the light of laboratory revelation.

A pioneer American physician early in the nineteenth century laid great stress upon the necessary connection of observation and reasoning in medicine. Let all engaged in teaching practical medicine insist on the necessity of logically sifting and comparing evidence from all sources in making diagnosis and constructing a rational therapy from all sources of enlightenment, from autopsy back to physiology and the therapeutics of the field, the garden, the mine and the blood, with hematological, neurological and psychological therapeutic resource.

OSTEOPATHIC "PETIT MAL" NOT IN MANIFEST FORM.—*The Journal of the A. M. A.* notes the trial recently in the Superior Court at Asheville, N. C., Judge Justice presiding, an osteopath was admitted and qualified as an expert medical witness in a case for damages against the Southern Railway, brought by a man whose child was struck on the head five

years ago by a falling transom inside a car. The testimony of two reputable physicians, one an ex-president of the State Medical Society, who had examined the child recently, was that the child was in excellent health, bright, intelligent for his years, and they were unable to find anything of pathologic character warranting the maintaining of the action. The osteopath testified that as a "result of the blow and the shock induced thereby, a thickening of the brain and a resulting dislocation of several vertebræ had induced '*petit mal*' with which the child is now affected, though not in a manifest form." Verdict \$2,000 damages for the plaintiff.

Such is American medical expert testimony before the law. What is the use of collegiate preliminary and five years medical courses for regulars, when fakes and fakers like these who make a method of practice out of a minor part of massage and assume with nonchalant egoism and express with confidence, knowledge they do not possess and courts admit their false statements as facts?

STATE LABORATORY OF PATHOLOGY FOR THE STUDY OF INSANITY.—Dr. T. H. Weisenburg, of Philadelphia, maintained before the Pennsylvania State Medical Association that further knowledge of insanity could be gained only through pathological work. Every physician connected with an insane hospital should have a working knowledge of the pathology of insanity and of the progress that was being constantly made in serum therapy. A state laboratory was therefore necessary.

While we do not agree that further knowledge of insanity can only be gained through pathology superseding the clinical we think every state should have such a pathological laboratory as recommended, even if the state medical society should substitute one for the state journal.

Why not connect one with every state hospital for the insane as is done with many now and encourage the study of psychiatry in all of its phases for the entire profession? Insanity should be known to all physicians and taught in all medical schools.

BRAINS GONE WRONG.—A certain large proportion of the American people are in need of being looked after by the psychiatrist. The psychiatrist, like the school-master, should be abroad in the land and become a public institution, for what with the vagaries of the mind-healers, Christian Science, osteopathy, chiropractic, malicious magnetism, Holy Jumpers, believers in the mystic and occult, the ostentatious blessing of inanimate bridges, etc., and other lifeless things, we are getting in a bad way psychically.

These deluded followers and seekers of the marvellous, the faith healers and faith followers of get-rich-quick promoters remind us of the remark of an insane asylum patient, who during the Civil War when the patients were returned to their home counties, remarked in explanation, that the whole country had gone crazy and the management, of whom he considered himself the chief, concluded that there was no use in keeping housed in the asylum a limited number no worse than those outside. It was an unfair discrimination. They might as well be out with the rest of the lunatics.

LEVELHEADEDNESS IN PUBLIC MEN, always essential in every walk in life, even at banquets with wine under the diaphragm, has had a new and gravely important confirmation in the recent *mal apropos* and silly "last dollar and last drop of blood" exuberant oral effusion of Commander Sims at Guild Hall.

Wine in the heads of the military minded more than once in history has wrought havoc and "let slip the dogs of war" that might have been averted or restrained under sobriety of decision, from Nero's day to ours.

Some day, (but O Lord, how long) will come with the diffusion of higher psychological intelligence in high places, insistence on the stable neurone in our places of trust, responsibility and honor and prudent speech.

The conception, the birth and building of the composite brain and mind of this nation where every mature mind may vote and mayhap be an official, is no matter of slight consideration with this people of peculiar destiny.

THE HEALTH DEPARTMENT ABODES of many of our large cities are often the least sanitary in construction and care and least attractive to the eye of any of the city public buildings. Why is this thus?

THE OBSERVATION WARD of the City Hospital needs rearranging and remanaging on psychiatric principles, so that noisy and violent patients may be placed so as not to disturb quiet and that the violently insane may not contribute to convert the prodromal cases and suspects into cases of real insanity.

AS TO UNINFORMED POLICE for guards, that would be an anachronism in insane management, back to the early days of Bedlam and before the days of Doctors Pinel and Chiarugi and the humane Tukes. Blue coats, batons and brass buttons, harmfully suggest turbulence and violence to the insane mind and tend rather to confirm and perpetuate, than to cure lunacy. The observation departments of all city hospitals should have for medical officers in charge experienced alienists. Here is a proper place for our ex-medical officers of hospitals for the insane so numerous made by our political system of undue official rotation in state institutions.

 A TEXAS SURGEON'S VIEW OF ALCOHOL AND THE SURGICAL CURE OF ALCOHOLISM.—Texans have unique styles of expression sometimes, of which the following, by Dr. J. W. Kenney in "Daniel's Red Back," is a sample:

"In the beginning of its career, alcohol was harmless, being chiefly used as a toilet article. To-day it is the belly cheer of the world, and is disputing first place with the great White Plague as a destroyer of the human race."

Dr. Kenney gives a number of successful gastro-jejunostomies and concludes with the following final words concerning the last of his two failures:

"The relapsing case was that of a middle aged, half-witted man. He was evidently sent to me with the hope that the operation would kill him, for no sooner did I an-

nounce the fact that he had passed the danger point than his wife and brother-in-law wanted to take him home.

"They did this over my protest, on the ninth or tenth day, and placed him in a filthy room a few feet from his wife's beer saloon, where former friends congregated and drank about his bed. The only reason that I can now give for operating upon this man is that I possessed the zeal of a recent convert to the curative properties of surgery in chronic alcoholism."

THE ROYCROFTT SHOP, East Aurora, N. Y., is a work shop of good will to mankind and other good things especially for his comfort and Elbert Hubbard is the boss mechanic of the sentimental section. He works in books and thoughts. His thoughts are good. His books are good and "*bound to win*" in every sense and seldom senseless.

PITILESS POLICE DIAGNOSIS of drunken stupor is too common a mistake by "the force."

A man falls from a street car and lies helpless until a smart policeman sees him, and with the ever ready police diagnosis of drunkenness, handles him roughly, putting him in a noisy cell for the night to the peril of his chances for recovery whether alcoholically or traumatically damaged in brain.

An ordinary police station cell, even for ordinary alcoholic coma is not good therapeutics and for traumatic coma it is cruelty. Diagnosis does not belong to the duties of the police. They should call the doctors in.

A GRACEFUL PROFESSIONAL APPRECIATION.—The Medical Club of Philadelphia, October 21st last, gave a reception to twenty-seven physicians from various parts of the state who had practiced medicine fifty years or more. Of course our worthy colleague, S. Weir Mitchell, was included.

An equally graceful and appropriate affair was the testimonial dinner to our worthy, venerated and venerable friend, Dr. James M. Bodine, of Louisville.

DR. WM. FULLER, OF GRAND RAPIDS, MICHIGAN, is probably the best localizing brain surgeon in our country. His sectional brain casts exhibited by the editor at home and abroad and used for demonstration purposes in lectures have been admired and commended by all capable of judging. Dr. Fuller's skill as a focal brain lesion diagnostician and surgeon are not surpassed by Victor Horsey and that is saying much for him.

He has several times removed the ganglion of Gasser. His book of plates and his models should be in the hands of every surgeon.

DR. M. P. OVERHOLZER is the newly-elected superintendent of the Nevada Missouri State Hospital for the insane succeeding Dr. Lamkin, resigned.

AMERICAN SOCIETY OF MEDICAL SOCIOLOGY's preliminary announcement is received. This society has an important field not covered by another existing society.

The time is propitious for its birth. The world needs much knowledge in rational scientific sociology.

OLD AGE AMONG PHYSICIANS.—*The Medical Record* for last September among a page of twelve obituaries, records the death of one physician at the age of 87, one at the age of 84, two at the age of 82, one at 76, one at 68, one at 65. Of the remainder two died at 59 and 47 respectively, and the age of one is not given.

NEUROPATHS NOT ALL IN AMERICA.—After the conviction of Dr. Crippen, the London dentist, for the murder of his wife and the acquittal of his adulteress companion, Miss Le Neve, who fled with him disguised as a boy, she was the recipient of numerous offers of marriage and stage engagements. Innocent or guilty, probably innocent, she is not the sort of woman that sane men seek in marriage. But there are erotopathic decadents across the water beyond the boundaries of the so-called American disease.

MRS. EDDY HERSELF CONFIRMED IN THE LONGEVITY of her remarkably frail appearing psychasthenic organism as when she came under Dr. Hozea Quimby's care and the psychic influence of his personality and teachings and her own subsequent impressions of the nonentity of disease, the influence of mind over brain and body conditions, though the same is not all there is of rational therapeutics and those who rely exclusively thereon are doomed to be deceived at last for Mrs. Eddy really died of real disease.

Her life was an exemplifying phase, limited to bodily disease, of the Berkleyian philosophy and of other believers in the unreality of the realities about us.

THE AMERICAN MEDICAL COLLEGE OF ST. LOUIS (Reformed Eclectic) exhibited progressive spirit in providing a series of specially entertaining and instructive lectures on Narcotics and Narcotism from Dr. T. G. Crothers of Walnut Lodge, Hartford, Conn. Dr. Crothers made a good impression on faculty and students as he always does on this, his favorite theme.

It would be well if more schools followed the example of the American Medical College and also if a few lectures on practical bedside psychiatry and optometry were also added to the student's instruction in all medical colleges.

LADY COOK ON EUGENICS.—“There are plenty of institutions built already—too many—such as our insane asylums and gaols, that are peopled with the offspring of ignorant mothers, and of debased, debauched and diseased fathers. They are every one filled, but we have got to the limit. The women have got to act, and they can stop it in one or two decades by stopping the supply.”

This, if practical, would be better than oophorectomy, vasectomy or other forms of asexualization.

EMPEROR WILLIAM FOR ALCOHOLIC ABSTINENCE.—In the opening of the new naval academy at Muerwick Emperor William advised naval cadets to become total abstainers.

The times, the Emperor said, require iron-hearted men. Character was the first essential and character was founded on strong moral and religious convictions.

The Emperor cautioned the cadets against excessive drinking, which he said undermined the nerves and the strenuous naval service of to-day required strong nerves. He counselled total abstinence, suggested that the young men join the Good Templars and added that the nation, which in the future used the smallest amount of alcohol would march at the head of the column on the fields of art and war.

The Emperor of Germany is a wise monarch on this subject. It would be well in view of what science is teaching on the subject, if our army and navy and people should come to realize that alcoholic beverages are a delusion and a snare and that the nation deceived thereby is neither wise nor on the way that leads from decadence.

ANECDOTE OF LOMBROSO BY FORBES WINSLOW.—“Lombroso had a wonderful personality. He was a kind-hearted man, though he was dreaded by students when undergoing examinations for their degrees at the University of Turin in consequence of his manner not being properly understood, which frightened the timid examinee; but behind his brusque demeanor was a capacious, kind heart, and a mind open to conviction. He would say to the student with a small and badly formed head: ‘You have mistaken your calling; you are a degenerate.’ To another he would say: ‘From the formation of your head, you are an epileptic.’ Whilst to a third he would remark: ‘From your general aspect, demeanor, and sly appearance, you are a moral pervert.’ Unless the students agreed with all Lombroso said, they were sure to be plucked. One doctor of medicine at Turin, who had gone through the ordeal, told me about this.”—*Abstracted from Literary Notes, Inter-State Med. Jour.*

DOCTOR PERRY.—Dr. Fasset, of the *St. Joseph Medical Herald*, who likes to speak well of good doctors of medicine, has this to say of Dr. Perry:

The subject of our front cover illustration, president-elect of the Medical Association of the Southwest, was born in Lancaster, Texas, August 15, 1868. He was reared on his

father's farm, attending the public school, and later the University of Texas; was graduated from the medical department of the University of Tennessee in 1892, serving as interne for a year in the Nashville City Hospital; assistant physician New Jersey State Hospital for Insane, 1894-98, following which a year was spent in Europe, six months in Obersteiner's neurological laboratory; pathologist State Hospital for Insane, Milledgeville, Ga., 1899-1903; appointed to the superintendency of the State Hospital for Epileptics, Parsons, Kas., at the opening of the institution in 1903, and has remained in charge ever since, establishing an excellent record for executive, as well as professional, efficiency.

Dr. Perry is a brainy, progressive, enthusiastic man, resourceful and energetic, and the Southwest Association has honored itself by electing him to its highest position of honor.

LOWER THE STEPS.—The Public Service Corporation of Trenton, N. J., has been asked to look into the complaint that the steps of the street cars are so high that women can not mount them in their present narrow skirts. The steps may be made 6 inches lower to accommodate these ladies and also for children and old persons. Trenton is not the only city in the country with steps of the street cars too high.—*News Item.*

A move in the right direction for comfort, convenience and health of our little women, the feeble, aged and children. Make the street car corporations stop pulling the legs of our little women. If they do not the lawyers will some day get hold of them (not the legs of the ladies) for damages and the corporation will wish they had been more considerate in this particular as they will likewise wish if they do not ventilate better and provide better seating capacity for ladies. The natural gallantry of man suggests giving his seat to ladies but the companies should provide them. One man can give but one seat and in a car full of ladies there would not be seats enough for all, even if the men all stood and discrimination in favor of a few ladies is not fair to the rest.

The strain of the high step on the back should be considered.

EUGENICS AND DEGENERACY AND INSANITY AND MARRIAGE were discussed at the last meeting of the British Medico-Psychologic Association.

As an honorary member of that most honorable and efficient organization in the uplift of humanity, through the persistent efforts of our great humanitarian profession, the editor of this magazine is gratified at and congratulates this society upon the following papers: "Eugenics and Degeneracy," by Dr. C. T. Ewart and "Insanity and Marriage," by Dr. G. H. Savage, and would have accepted with pleasure its invitation to engage in the discussion of these most important subjects nearer at hand. The following was written to send on but was ready too late for transmission.

Pliny Earle, the accomplished and eminent superintendent of the Northampton, Mass. Lunatic Asylum, used to say that the decrease of and eradication of insanity must be brought about by prevention rather than treatment. And this is the most significant aspect in the eugenics of psychiatry and neuriatry. The treatment of these subjects, keeping in mind the meritorious authors, Doctors Savage and Ewart, is *prima facie* worthy of high commendation and, reading the respective contributions by these distinguished men, fully confirms the *prima facie* impression. When they write on any subject we know what to expect in the line of profitable enlightenment and we are not disappointed.

Eugenic is the crowning glory of the medical profession, from the vaccinations of Jenner up through all the advances in serum therapy, hygiene, the sequestration and saving of the insane, the prevention of the idiot and epileptic from propagation of their kind by segregation from the world, and given the world, without money and without price, freely of our counsel, all too freely perhaps for ready acceptance.

But when the world comes to a right appreciation of eugenics and sees, as we do, the ways for the better welfare of the race through right propagation of the right kind of progeny and puts practical methods of safety into practice, we shall become as healthy as the other animals are, which our enlightened civilization displays so much concern for in the breeding.

Goethe said, "By sight of science we know in day time there are stars above us though we see them only in the night time." Eugenic cytology and psychology and right sequestration and proper sexual surgery under right medical advice will solve the problem of racial safety.

Advanced hematology has revealed so much of the value of the neurone and of the conserving, resisting and disease destroying power of the leucocyte and phagocyte elements of the blood and of the conditions of metabolic resistance that the way is clear for the prevention of neuraxis morbid states. The only question is how and when and where will the world accept and act upon, in a conservative manner, our warning discoveries and suggestions?

THE SPLEEN IN POST-OPERATIVE PARESIS OF THE INTESTINE.—A. Henle (*Muenchener Medizinische Wochenschrift*, 1910, p. 2600), found that extracts of the spleen injected into the vein of men cured chronic constipation for a month, when it returned. In acute paresis and in paralysis of the intestines he had satisfactory results. Henle thinks it is of great value to the abdominal surgeon in post-operative paresis.

Ott (*Medical Bulletin*, 1897), was the first to prove that the spleen extract was an active agent in the stirring up peristaltic movements.

THE HYPOPHYSIS AND CASTRATION.—With a review of the literature, G. Fichera, (*Il. Policlinico*), gives a case, with autopsy, where congestion of the pituitary gland was marked after hyperactivity and with chromophile elements, enlarged gland, increased blood and newly formed capillaries, quoting other authors who had noted transient post castration hypertrophy.

THALAMIC HEAT CENTER.—Streerath in Kronecker's laboratory proved the existence of a thermogenic center in the thalamus which is more powerful than the one in the corpus striatum. (*Archiv. fur Physiologie*, 1910, p. 315). This observation confirms the discovery of the thalamic

heat center by Ott, which he has more exactly localized in the tuber cinereum. Bechterew and Sakovic (*Die Funktionen der Nervencentra, Zweites Heft*, S. 1176) also have shown that puncture of the tuber cinereum increases the temperature and heat production.

LONGVIEW HOSPITAL LECTURES IN CLINICAL PSYCHIATRY.
—February 11—Dr. Langdon, Dementia Præcox. February 18—Dr. Hoppe, The Manic-Depressive Psychosis. February 25—Dr. Wolfstein, Confusional Insanity. March 4—Dr. Zenner, Alcoholic Insanity. March 11—Dr. Langdon, Melancholia. March 18—Dr. Hoppe, Paresis. March 25—Dr. Wolfstein, Paranoia. April 1—Dr. Zenner, Senile Dementia. Open to practitioners of medicine and senior students only.

CONSOLIDATION OF MEDICAL MAGAZINES IN THE WEST.—On January 1st, 1911, *The Kansas City Medical Index-Lancet* merged with *The Medical Herald*. Too good magazines made better if that be a possibility. Success to the *United Medical Magazines* of the Missouri Valley.

CORRESPONDENCE.

Paris, September 1, 1910.

DEAR SIR AND ESTEEMED COLLEAGUE:—

The horrors of war have suggested to several colleagues, as well as myself, the idea of assembling at Paris, at a date which will be fixed later on, an International Congress of medical men, who in the name of their mission and of humanity would meet to protest against armed conflicts, thus bringing a powerful assistance to the work of peace by arbitration.

With this aim and after deliberation by the inaugural Committee, an association was formed, which assumed the title of "International Medical Association for the Prevention of War."

In the name of the Executive Committee, and as President of this Association, I desire to assure you how happy we should be to have you on our honorary Committee which already includes:

Albert Adamkiewicz, d'Arsonval, G. Baccelli, Michel Badkevitch, Benedikit, Berthelot, Pietro Bodini, Bouchard, Bourget, Brissaud, Georges Brown, Sir J. Crichton Browne, Ramon y Cajal, Lucas Championniere, Charrin, Djemih Pacha, Ludwig Edinger, Erb, Von d'Esmark, Edward D. Fischer, J-A. Fournier, Armand Gautier, Hayem, Linton Heath, Hoffa, Huchard, Joffroy, Kennelly, Landouzy, Lannelongue, Lassar, A.-J. Lebedeff, Lombroso, Sir Francis Mac-Cabe, Martini, Mendelssohn, Nitze, C. Phillips, Pozzi, Rajenoff, Nicolas Ratchinkinski, Reclus, Auguste Reverdin, Charles Richet, Rosenthal, Roux, Sahli, Sir William Thomson, Sophus Torup, Anton Weichselbaum, Samuel West, etc., etc.

The authority of your name would be a valuable support to us in the enterprise of lofty humanity which we hope to

realize, and it is for this reason that we beg to be allowed to rely on your adhesion.

I beg to remain, Dear Sir and esteemed Colleague, yours sincerely,

DOCTOR J. RIVIERE,

President.

AMERICAN MEMBERS OF THE MEDICAL INTERNATIONAL ASSOCIATION FOR THE SUPPRESSION OF WAR.

Dr. John Winters Brannan, 11 W. 12th., New York, N. Y.

Dr. M. W. Brinkmann, 54 W. 90th St., N. Y.

Dr. Joshua L. Barton, 57 E. 55th St., N. Y.

Dr. George Brown, Atlanta, Ga.

Vice-Pres. Prof. Edward D. Fisker, 19 W. 52nd St., New York.

Vice-Pres. Dr. Emil Heuel, President of the American Electro-Therapeutic Association, New York.

Vice-Pres. Dr. Prof. C. H. Hughes, 3858 West Pine Boulevard, St. Louis.

Vice-Pres. Dr. A. E. Kennely, Prof. Elec. Engineering, Pierce Hall, Harvard University, Cambridge, Mass.

Dr. Miran H. Kassabian, Director of the Roentgen Ray Laboratory of Philadelphia Hospital, 1831 Chestnut St., Philadelphia, Pa.

Vice-Pres. Dr. Howard A. Kelley, Prof. of Gynecological Surgery, Johns Hopkins University, and Hospital, 1406 Cusay Place, Baltimore, Md.

Dr. Moore Lindsay, Salt Lake City, Utah.

Vice.-Pres. Wm. James Morton, 19 E. 28th Street, New York.

Vice-Pres. Franklin H. Martin, 103 State Street, Chicago, Ill.

Dr. Geo. Powers, 218 Stockholm, St. San Francisco, Cal.

Dr. W. B. Robinson, 42 W. 37th Street, New York, N. Y.

Dr. W. J. Robinson, 12 Mount Moore's Park, West, New York.

Dr. A. Ravogli, 5 Garfield Place, Cincinnati, O.

Dr. Clarence Edward Skinner, New Haven, Conn.

Dr. L. Seaman, 247 Fifth Ave., New York.

Dr. Henry Schwarz, 440 Hempstead Ave., St. Louis, Mo.

Dr. C. Corckhelmer—The Ortiz—Cincinnati, O.

Dr. William Benham Snow, Editor of the *Journal of Advanced Therapeutics*, President of the American Section, 329 W. 25th St., New York.

Vice-Pres. Dr. James Tyson, 1506 Spruce Street, Philadelphia, Pa.

Dr. M. Vynt. Cyrode, Harvard Medical School, Boston.

Dr. Roland C. White, 913 Western Ave., Allegheny, Pa.

Dr. Wendell E. Phillips, 40 West 47th Street, New York.

Dr. E. F. Williams, Green Bay, Wis.

Dr. Ernest Shurley, Detroit, Mich.

Dr. Charles Norman Fiske, Assistant Surgeon, U. S. A., Washington, home address, Upson, Mass.

Dr. Montague R. Levenson, 927 Grant Ave., Cor. 169th St., New York.

Dr. Tom. A. Williams, Washington, D. C.

Dr. M. A. Robbins, Wichcliffe, W. Va.

Dr. J. Bennett Morrison, Newark, N. J.

Dr. Frederick C. Jacobson, Newark, N. J.

Dr. Louis C. Rouglin, Atlanta, Ga.

Dr. Samuel C. Shope, Harrisburg, Pa.

Dr. R. A. Pearse, Brigham, Utah.

Dr. C. H. Gray, Orange, N. J.

Dr. C. R. Collins, 1641 R. St., Washington.

REVIEWS, BOOK NOTICES, REPRINTS, ETC.

PSYCHE. A Concise and Easily Comprehensible Treatise on The Elements of Psychology and Psychiatry for Students of Medicine and Law, by Dr. Max Talmey. Price, \$2.50 (net) per copy. The Medico-Legal Publishing Company, 55 West 126th Street, New York City.

This book will enable those interested in mental disease to acquire a fairly complete knowledge of insanity without long, arduous study. Thoroughly scientific in scope and method, this treatise presents the complicated subject of psychiatry simply and clearly for the general medical reader and amateur in psychiatry within the comprehension of educated laymen, attorneys, pedagogues and literati.

The work is brief yet comprehensive. It treats of Psychology or Physiology of the mental functions, general pathology of the mental functions, etiology of insanity, prognosis and therapy of the psychoses and the special pathology of insanity. It is well indexed. It has interesting chapters on sensations, sense impressions, feelings, morbid moods, hallucinations, delusions, compulsory ideas, idiocy, defective children, recurrent insanity, manic depressive insanity, etc., etc.

The author in his preface truly says:

"No branch of medical science surpasses psychiatry in importance. For mental disease is increasing in frequency; it renders its victims dangerous to the community; it cuts short the lives of some patients and permanently disables many; and, lastly, owing to its hereditary tendencies, it contributes largely to race degeneracy. Yet the study of psychiatry has been greatly neglected, chiefly due to the preposterous views, based upon superstition, which prevailed in former times. Until recently instruction in psy-

chiatry was seldom given in medical schools." The author further says: "To-day lectures in diseases of the mind are held in the best medical colleges, but no final examination in psychiatry is required from the matriculates."

As to the final examinations the author is mistaken. The reviewer has lectured for three decades on psychiatry in three medical colleges and examined in two of them at the end of each session.

SERO-CYTO-DIAGNOSIS AND ITS IMPORTANCE IN THE DIAGNOSIS OF THE VARIOUS INSANITIES. By John D. O'Brien, M. D., and Oral D. Tatje, M. D., Massillon, O. From *The Cleveland Medical Journal*, November, 1910.

The authors made use of the Wassermann reaction applied to the blood and cerebrospinal fluid. They also used the butyric acid test as recommended by Noguchi, in addition to controlling such findings by means of a cytological examination of the cerebrospinal fluid.

The authors thus summarize: Of all the elements of diagnosis, the serological, chemical and cytological examinations of the cerebrospinal fluid approach nearest to the nature of an anatomical examination of the central nervous system.

For the present it should be remembered that the results of such examinations, as in a case of paresis, are to be questioned, if the histological examination fails to show the picture of what we understand as the cortical changes of paresis.

If the Wassermann reaction is to be considered biologically specific for syphilis, one can readily see that syphilis occupies an important position in the etiology of all the insanities.

We consider the cytological examination with increased proteid content a more important diagnostic feature of paresis than the Wassermann reaction alone.

In active syphilis of the nervous system the characteristic reaction in the blood is an antigen reaction, and indicates the presence and activity of the syphilitic virus in the body, while in the supposedly parasyphilitic conditions there is a different reaction. In this case, the reaction in the blood is an antibody

reaction and it gives no indication of any active syphilitic process. The authors thank Dr. Adair for his assistance in performing lumbar puncture on a number of the above reported cases.

FOURTH BIENNIAL REPORT OF THE STATE HOSPITAL FOR
EPILEPTICS, PARSONS, KANSAS, 1910.

It is great to take care of the wounded in the battle of life, but cruel to transmit their wounds to posterity. Our duty is only half done when we care for epileptics. Our other duty is to prevent this appalling disease, so largely the product of bad heredity, alcoholism and organic vice. This interesting report records good progress in educational training and gives some interesting cases of pellagra.

This report says: "Of the admissions during the last two years about one-third of the adults had been married and more than half of these had married after they had become epileptic. Within the period covered by this report, four more of the less mentally deficient women admitted on voluntary confinement left the hospital and have married, notwithstanding that there is a law in Kansas prohibiting the marriage of epileptics and other degenerates. Such facts speak for themselves and further comment is unnecessary."

INTERNAL SECRETIONS FROM A PHYSIOLOGICAL AND THERAPEUTICAL STANDPOINT, by Isaac Ott, A. M., M. D., Prof. of Physiology in the Medico-Chirurgical College of Philadelphia, etc., etc. E. D. Vogel, Bookseller, Easton, Pa. Price, \$1.00.

The author in his preface to this valuable and experimental contribution to the therapy of the internal secretions, being three lectures delivered before the students of the Medico-Chirurgical College, states that "while many statements are contradictory, yet," he has "included them, as the whole subject is in a state of flux and reflux." "*Dire n'est rien; faire est tout.*"—Renan.

Dr. Ott is well known by his previous and greater work and by former contributions to the *Alienist and Neurologist*. These research experiments and illustrations will interest

all who read the *Alienist and Neurologist* and others similarly enlightened and seeking for physiologic and therapeutic truth as bases of right reasoning and procedure in medical practice.

LA PSYCHOLOGIE DE L'ATTENTION, par N. Vaschide et Raymond Meunier, 1 vol. in-16 de la collection de *Psychologie expérimentale et de Métapsychie*. Prix: 3 francs. Librairie Bloud et Cie, 7, place Saint-Sulpice, Paris (VIe.)

Les auteurs ont exposé dans un récent volume de la même collection la Pathologie de l'Attention. Ils ont essayé, dans ce nouveau volume, de poser à nouveau le problème de l'Attention sur son terrain expérimental et d'en différencier les aspects. Ils ont posé les conclusions qu'autorisaient les données expérimentales actuellement existantes sur la question.

Die Alkoholfrage is a new quarterly review devoted to scientific and practical phases of the alcohol question. It notes in Germany as a striking fact that the alcohol problem has for a long time been denied due attention because of our custom of considering the use of alcoholic drinks as a mere private affair. How much or how little a person takes of these drinks, that—we thought—concerned only the individual. "To know and control one's self is the task of the individual." One took the problem for a private affair and overlooked, or at least, undervalued the full importance which the drinking custom of the individual must have for the persons around him and for his descendants. One hardly realized to its full extent the connection between such drinking and criminality, pauperism and other social miseries, nor did we feel strongly enough how far the whole efficiency of a people must be paralyzed by the custom of such drinking.

"In the course of the last few years a change for the better has set in. More and more people are coming to comprehend that alcoholism is to be looked upon not only as a disease of the individual, but of the nation, and that the struggle against alcoholism is one of the foremost social duties."

MENTALLY DEFICIENT CHILDREN, THEIR TREATMENT AND TRAINING. By G. E. Shuttleworth, B. A., M. D., &c., Medical Examiner of Defective Children to the Willesden Education Committee, and Formerly to the School Board for London, etc., etc., Formerly Assistant Medical Officer, Earlswood Asylum, and Medical Expert, M. A. B. Institution for Improvable Imbeciles, Ealing, and W. A. Potts, B. A., M. D., &c., Consulting Medical Officer National Association for the Feeble-Minded; Formerly Resident Medical Officer, Yorkshire East Riding Lunatic Asylum, etc. Third Edition, Philadelphia, P. Blakiston's Son and Co., 1910.

This meritorious book by two capable authorities on the subject is justly and most appropriately inscribed to the memory of the truly illustrious Edouard Séguin, M. D., who for forty-two years, both in the old world and the new, practically and with his pen labored to improve the condition of mentally deficient children by the application of physiology to education.

In this new edition the original author has the co-operation of Dr. W. A. Potts, of Birmingham, whose long practical experience as Chairman of the After-Care Committee and a member of the Special Schools Committee of that city, and exceptional opportunities of observation as one of the medical investigators appointed by the Royal Commission on the Care and Control of the Feeble-minded, render him thoroughly conversant with the subjects therein dealt with.

The original author has been much encouraged by the kind reception rightly accorded the previous editions.

Several new illustrations are introduced into this edition, for some of which he has to thank Drs. Moorhead Murdoch, A. C. Rodgers (of America), Telford-Smith, Archibald Douglas, R. P. Cockburn, and other professional friends. He also expresses obligations to Dr. Carson, of Syracuse, N. Y., Dr. Caldecott, of Earlswood, and to Dr. James Kerr, Chief Medical Officer, for valuable information which they have accumulated.

The second edition has been translated by an appreciative physician, Dr. August Ley, of Brussels.

The illustrations are enlightening as well as the text and it is gratifying to note the growing professional appreciation of the subject and the author's clear and experienced presentation. We extend to Dr. Shuttleworth and his able colleague and collaborator our congratulations and high estimate of this good book.

Nevertheless, the fact remains, that it is a reproach to the medical profession and to the enlightened age in which we live that the mentally deficient and otherwise defective continue to increase in numbers. Prophylaxis should diminish the present threatening ratio of propagation.

MEDICAL EDUCATION IN THE UNITED STATES AND CANADA.

A Report to the Carnegie Foundation for the Advancement of Teaching. By Abraham Flexner, with an Introduction by Henry S. Pritchett, President of the Foundation.

This is not an impartial report, seeking only for facts and reflecting for the welfare alone of medical teaching and the good of all worthy medical schools in the United States.

It is a lawyer's specious plea for his client and his fee and not the powerful plea of a real attorney seeking only light and right. The writer is neither a real barrister nor a physician. It is a sophistical plea in extenuation of an assault with intent to kill about all but a limited number of university annexed colleges of the United States and Canada. It assumes that only big universities and big money justify medical schools and that only one-sixth of the medical colleges and the university annexes have the right to live.

It deals in the logic and observation of the amateur, sophistically picks out peccadillos that portray the author's ignorance of his theme and unfitness for his assumed censorship of a subject he does not understand beyond the limit of probable sinister coaching for his apparently unfair purpose.

He picks at peccadillos in the schools he wishes to condemn as one would strain at a gnat while attempting to swallow a camel, for a school predetermined, in his esteem or scheme, for condemnation. For instance, rooms not clean in an unfavored college are noted, but not mentioned in others

and subjects left on dissecting room tables in other unfavored schools at the close of the sessions, as they are in most colleges, are mentioned for condemnation of the fated victim, and besides this, abandoned "stiffs" are spoken of as resembling dried leather, as if they could appear otherwise to one but an ignoramus as to post dissection when any examined muscle and skin are permitted to remain long with the cadaver after examination. (*Continued on page 233 et seq.*)

"PHYSIOLOGICAL AND MEDICAL OBSERVATIONS" comes to us from the Bureau of American Ethnology Bulletin, number 34.

These observations have been made among the American Indians of the Southwestern United States and Mexico and remind us much of the superstitious mental faith cure beliefs existing among and practiced by a certain number of our thinly veneered civilized minds of to-day. The counterpart belief of Christian Science, malicious magnetism or witchcraft appears in certain tribes, the Apaches, Navahos, Hopi and Walapai and others and death is often the penalty of failure to cure when the white man does not intervene to save the unfortunate practitioner.

UNDERGRADUATE PROCTOLOGY. By Dwight H. Murray, M. D., Syracuse, N. Y., President's Address before American Proctologic Society, 1910.

The American Proctologic Society announces a cash prize of \$100.00 in 1911, to the author of the best original type written essay on any disease of the colon. Essays must be submitted on or before May 10, 1911.

A motto or device, without signature or other indication of authorship, accompanied by a separate sealed envelope, having on its outside only the motto or device contained on the essay and within the name, the motto or device and the address of the author is required. No envelope will be opened except that which accompanies the successful essay.

PROFESSOR JOSEPH JASTROW, OF THE UNIVERSITY OF WISCONSIN, contributes an interesting article to the October Hampton's on "Malicious Animal Magnetism."

The article refers to several Christian Science briefs but the author has not treated the subject of Christian Science as a religion. This is written and published for real scientific reasons. Incidentally Hampton's general aim, like that of the *Alienist and Neurologist*, is to discuss movements and matters that menace mankind, as all modern magazines should do.

SOME POSOLOGICAL HINTS AND OTHER USEFUL INFORMATION sent to the medical profession with the compliments of the manufacturers of Fellows' Compound Syrup of Hypophosphites is a useful *vade mecum* composed for the active practitioner, especially the general country physician. It is a valuable companion during his rides and a good office ready reference dosage manual, with other essential matters of merit for the physician in practice. It is "good goods" like the hypophosphites themselves. Its table of incompatibles is useful to the prescriber and an especially good companion for the young physician. It may be had for the asking.

THE LETTERS OF DR. BETTERMAN.—Most of these have appeared in *The Office Practitioner*, and have been well received. Doctor Charles Elton Blanch is the editor and J. D. Albright is the publisher. The price in art-poster cover, 75 cents postpaid. Every physician may read this little book with profit.

THE EYE OPENER is unique in its method of dealing with the liquor question. It is an excellent thing for a boy or girl to read. It sees things and shows them concerning the evils of intemperance. Though it has not the scientific vision of those who see and know deeper, it discerns that wine taken into the human system "is a mocker," as was written of it of old.

The Eye Opener works for the welfare of man on these lines. It does not know as we do that alcohol is a robber of the tissues, taking from them their water of nourishing life, but it does discern in a tangible, clearly perceptible way that it is a moral and mental thief, stealing character and destroying brain.

PELLAGRA AS A PSYCHIATRIC STUDY and Cause of Insanity is the gist of a second paper by Dr. J. W. Babcock, of Columbia, S. C. who, with Dr. C. H. Lavinder, first called attention to the subject in this country.

Puerperal Insanity. Read before the Medical Society of the County of Albany, November 24, 1909. By J. Montgomery Mosher, M. D., Attending Specialist in Mental Diseases, Albany Hospital.—*From Albany Med. Annals.*

The author says: One mental manifestation, however, is prominent in every series of cases; hallucinations of the special senses are almost universally present. This symptom is the essential symptom of delirium, and in acute mental cases is pathognomonic of a toxic state. If puerperal cases are regarded as cases of delirium a very definite conception of this condition is at once established. In ten cases of the series observed at the Albany Hospital, hallucinations of the special senses were present, and in one other case were suspected. These were: "That the world was afire," that "She had no bowels," that "She was to be burned," that "Her sister and cousin were in the wall of the room," that "The nurses had choked her," that "She was numb all over," that "People were passing the house and talking about her." We have known men maniacs to have similar delusions.

I. Infantile Paralysis in Massachusetts in 1909. Reported for the Massachusetts State Board of Health by Robert W. Lovett, M. D.

II. Infantile Paralysis as Observed in Health District No. 15 during 1909. By Lyman A. Jones, M. D.

III. Methods of Treatment in Infantile Paralysis. By E. H. Bradford, M. D., Robert W. Lovett, M. D., E. G. Brackett, M. D., Augustus Thorndike, M. D., Robert Soutter, M. D., Robert B. Osgood, M. D.

IV. The Diagnosis of Infantile Paralysis in the Prodromal and Early Acute Stage, as Found in the Experimental Study of Acute Poliomyelitis in Monkeys. With Report of Findings in Four Human Cases. By William P. Lucas, M. D. Reprinted from the *Monthly Bulletin of the Massachusetts State Board of Health*. Good reading for all physicians.

A Combined Gastroscope and Gyromele for Diagnostic and Therapeutic Purposes. By Fenton B. Turk, M. D., Professor in the Post-Graduate Medical School; Director, Institute of Gastro-Enterological Diseases, Chicago; 1st Vice-President American Gastro-Enterological Association; Membre Correspondant Société d'Urologie, France, etc. Chicago. Reprinted from the Journal of the American Medical Association, December 5, 1903.

Danvers State Hospital Laboratory Papers, 1910. Charles Whitney Page Series. Reprinted from the *Boston Medical and Surgical Journal*, with a handsome picture of a handsome man, all bound together, lie on our table. W. M. Leonard, 101 Tremont Street, Boston, 1910, is the publisher.

These papers are valuable clinico-pathological portraits of interesting features of intra vitam diagnosis and necroscopic revelations creditable alike to the medical staff and the enlightened management of this worthy institution.

"Department of Commerce and Labor Bureau of the Census, E. Dana Durand, Director, Bulletin 108, Mortality Statistics: 1909, Deaths, Causes of Death, Comparisons with 1908, Deaths of Infants and Young Children, Occupational Mortality, Washington Government Printing Office, 1910." Matter like this ought to come from a department of Public Health.

The Montreal Medical Journal has ceased publication with the December issue. But we are pleased to learn from its Secretary, Dr. John Adair, that it yet lives in another form as the Journal of the Canadian Medical Association. Dr. Macphail, who for many years has had editorial charge of the *Montreal Medical Journal*, is retained as editor-in-chief of the new magazine.

Some Points in Bacterial Therapy. By F. E. Stewart, Ph. G., M. D., Philadelphia, Pa. Read before the American Therapeutic Society, Washington, D. C.

DER TABAK IN DER ATIOLOGIE DER PSYCHOSEN. Von Medizinalrat Prof. Dr. P. Näcke, Hubertusburg.

A paper of interest not only because of the author's conclusions on this important subject in psychiatry, but for its extensive references and quotations from men eminent and trustworthy in psychology.

Bulletin de la Commission Pénitentiaire Internationale Sixième Série Quatrième Volume, Livraisons XIII-XV. Chicago & Berne, 1910. En commission chez Stämpfli & Cie, à Berne.

This bulletin presents an interesting series of contributions, but inasmuch as the congress embraces English speaking people, it would seem appropriate that this should appear in the English language also.

The Symposium on Psychotherapy in the Transactions of the American Therapeutic Society, 1909. Edited by P. Brynberg Porter, A. M., M. D., New York and published by the Society, June, 1910, is of special interest to alienists, neurologists and neuropsychotherapists generally.

Why the Indifference of the Profession to Morphinism Should Be Changed. S. Grover Burnett, A. M., M. D., Kansas City, Mo., Professor Clinical Neurology and the Histological and Applied Anatomy of the Central Nervous System in the University Medical College, etc. Reprint from *The Medical Herald*, St. Joseph, Mo.

The Physics of Light and Electric Therapy. President's Annual Address before the American Electro-Therapeutic Association at Saratoga Springs, New York, September 13, 1910. By T. D. Crothers, M. D., Hartford, Conn. Reprint from *Albany Medical Annals*, November, 1910.

A good therapeutic showing by a good observer.

Experimental Researches Regarding the Mind in Vertigo. Vertigo as an Aid to Hypnotism and Narcosis. By J. Leonard Corning, A. M., M. D. From the *New York Medical Journal*.

Essay on Etiology, Pathology, Symptoms and Treatment of Exophthalmic Goitre. By E. Moore Fisher, M. D., Assistant Physician, New Jersey State Hospital at Morris Plains, N. J. P. O., Greystone Park, N. J. Awarded First Prize by the Medical Society of New Jersey.

The Meaning of the Association Test. Dr. Frederick Lyman Wells. A study of the time relations in the word list of Dr. Rosanoff and Miss Kent. From *Journal of Philosophy, Psychology and Scientific Methods*, April, 1910.

Interesting and valuable for all alienists and neurologists and psychologists.

A Study of Association in Insanity. By Grace Helen Kent, A. M. and A. J. Rosanoff, M. D., Kings Park State Hospital, N. Y. Reprint from *American Journal of Insanity*.

A practical paper of valuable information for alienists from a right source.

Cronica Médico-Quirurgica de la Habana comes to us much improved in appearance as well as matter. We are glad to receive it in its new flat mailing cover. We congratulate Dr. Fernandes, its distinguished editor-in-chief, on the fact.

Depressions. By E. Moore Fisher, M. D., Assistant Physician, State Hospital, Morris Plains, N. J. Reprinted from Proceedings of the American Medico-Psychological Association.

The Juvenile Form of General Paresis, With Report of a Case. By James V. May, M. D., Binghamton, N. Y., Asst. Physician, Binghamton State Hospital. Reprinted from *The Medical Record*.

Why the Indifference of the Profession to Morphinism Should Be Changed. By S. Grover Burnett, A. M., M. D., Kansas City, Mo. Reprint: *The Medical Herald*, St. Joseph, Mo.

MEDICAL EDUCATION IN THE UNITED STATES AND CANADA.

(Continued from page 227.)

The following letters from medical colleges unfavorably and unfairly criticised strongly condemn this unfair report.

Mr. Flexner visited our medical school by calling at the office of the college, at which time some questions were asked concerning the preliminary education exacted by the college from matriculants. He did not see any of the individual professors, observed none of the classes at work and made no note of any appliances that we use in teaching. He raised no question as to the personnel of our faculty.

Our college came in for its share of criticism in the Carnegie Foundation report, but it has not annoyed us very much. I do not believe an educational trust can be established on the order of the steel trust of which Mr. Carnegie is the founder. The work of the Carnegie Foundation seems to have for its goal the formation of such trust.

Mr. Flexner's visit and inspection of this college was certainly irregular and very unusual, to say the least.

He wrote to the Dean that he was coming, asking for catalogue. He was promptly answered and requested to write or phone when he would come so that the Dean and officers could meet him and give every possible information and assistance.

Later two gentlemen appeared at the college late in the afternoon, when no one was present but the clerk, and after looking about a little, they expressed no wish except to see the dissecting room.

As they were leaving, in answer to an inquiry as to who they were, replied Mr. Flexner and the name of a physician who had criticized the college in the past.

The visit lasted less than half an hour and appeared to be the casual call of persons in the interests of students.

A report of this visit printed separately was circulated very freely in the vicinity of the college, weeks in advance of the publication of the full report.

The statement of the examination of this college contained two absolutely false assertions which were distinctly libelous and actionable.

The secrecy of the inspection, and the obviously unfair report suggested prejudice and dishonest means, detrimental to the interests of the college, that were not only startling, but deplorable.

We are very sorry to have been the subject of such unreasonable and unjust reflections and sincerely hope that this was exceptional and not the rule with other colleges.

P. S. by Editor. The report brought the college a large number of friends who sympathize with the unfairness and effort to destroy it by making it appear so much worse than it really is.

One morning I received a message that Mr. Flexner was inspecting medical colleges. I called on Mr. Flexner and we had a talk. That is all the inspecting he did so far as I know at the college. So far as I am aware he saw none of the professors and teachers, nor did he visit the college at all.

When he called at one of our hospitals he remained outside in his automobile. He states that the school has only "access to two small hospitals," when in reality it owns both, and its faculty constitute the staffs. The two hospitals contain together 168 beds and are modern; on the other hand, he speaks favorably of a school in the west which has for all purposes a hospital of 20 beds.

He has done us considerable harm in Europe.

Mr. Flexner had written us of the date of his coming. Our school term was completed so he did not have an opportunity of seeing the actual work that we do. His examination was not as thorough as we would have liked owing to the limited time at his disposal. He asked little about the individual work although he seemed especially interested in some of the work which had been under the direction of Professor of Histology and Pathology. The things we regret the most in regard to Dr. Flexner's visit are the fact that it was made during our vacation, the short time he had to spend here and that he went away with the erroneous idea that our institution depended upon the fees received from students for its support while the truth is the medical department has to call on the endowment fund for payment of expenses each year.

Mr. Flexner visited our college on his own initiative and everything was shown him. He examined the college carefully, but we feel that he did us many injustices, as to the character of students, the work of the teachers and several inaccuracies which were more or less vital regarding our affiliations with allied hospitals. I believe in the main his work was good and will have a good effect, but it seems a shame that a report carrying as much weight as his should not have been more accurate and more unbiased for he did not give us a fair show as compared with some of the other colleges here.

Mr. Flexner was met at the college by a committee of three. He hurriedly went through the hospital and college, spent in all about three-quarters of an hour, did not see the equipment in detail, went to the other hospital, a distance of a mile, spent about a half hour there, then another hospital three miles away and back to the office, glanced over the books and left the city at five o'clock. He was in this city all told three hours.

These letters are from different sections of the United States and are from regular schools condemned in the report—

not half the letters of similar condemnatory tenor received—but for which we have not further space. The Kentucky school condemned in which Mr. Flexner's brother Abraham graduated is not here included.

But even from these letters from different sections of the country extending as far as the Atlantic is from the Pacific, is it not a shame and a crime against American medicine that such a so-called investigation should receive credence or even be received and read after its newspaper publication, before the American Medical Association as though it were a legitimate and true report of the condition of American medical schools in general?

We had intended a more complete review of this so-called Foundation Report, but after these letters came to us and too many others of similar import for the space for presentation at our disposal, the purport of the self-imposed, unauthorized and unsolicited, voluntarily assumed and unfair inquiry became so apparent that we concluded to let this calumnious effort speak its own condemnation.

The good things in this report, if report it may be called, are so far counterbalanced by its defective unfairness to the independent medical schools of the country and the strained plea for only richly endowed university annexes, and the attempt to convert all independent medical schools into dependent university annexes is so apparent that all intelligent medical educators who read it must see through it and disapprove. The medical profession is not yet ready to surrender its idols to literary or medical guidance and control.

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PUBLISHER'S DEPARTMENT.

PRAYER NOT AN ANTIDOTE TO RATTLESNAKE BITE.—

An agonizing death, caused by a rattlesnake bite, ended nearly a week of torture endured, through religious fanaticism, by Oliver Pugh, 60 years old, a Zion City follower of Wilbur Glenn Voliva.

True to the teachings of his creed, Pugh refused to take antidotes for the poison or medicine of any kind, relying on the prayers of his fellow religionists to cure him. Pugh was bitten on the little finger while in his strawberry patch.

FRESH PINEAPPLE JUICE FOR SURGICAL DIGESTION.—

B. G. R. Williams in the *Medical Record* used pineapple juice and shavings for the solution of furuncle crusts and digesting necroses. Another proof of its value as a digestant. It is as good for neurotic dyspeptics as for the furunculated.

CONGESTED PORTAL CIRCULATION.—The Sultan Drug Company claims that their Chionia acts purely as an hepatic stimulant, and produces a therapeutic action on the liver that cannot be produced by any other remedy in the *Materia Medica*—never causing nausea or nervous prostration.

HOSPITAL NOISE.—We abridge from the *St. L. Med. Rev.* Dr. H. A. Boyce's comment on this subject. On a visit to the English hospitals he was impressed by the quietness and was asked to lower his voice. Noise should be lessened for the benefit of the patients. This may be done by noiseless doors, floors and windows, electric light signals for bells, and the care of nurses, internes, no unnecessary talking. The ether, operating rooms, and ward kitchens should be so placed as to prevent the noise from reaching the wards.

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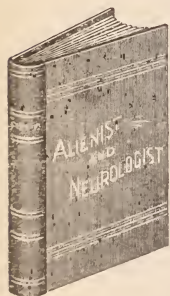
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A RECEPTION TO DR. SAJOUS.—The officers and fellows of the Manhattan Medical Society gave a reception to Dr. Charles E. de M. Sajous, of Philadelphia, at New York, October 28th. Dr. Sajous read an interesting paper, *Adrenals in their Relation to General Diseases and their Treatment*.

PROFESSOR MIGUEL BOMBARDA, who was recently assassinated at Lisbon, was best known to foreigners by his work as General Secretary of the Fifteenth International Congress, which met at Lisbon in April, 1906. His genius for organization made the Congress one of the most successful ever held, and at its close his efforts were fittingly recognized by the late King Carlos, who bestowed upon him the lilac ribbon, the gold chain, and the crimson cross of the Order of Santiago. The assassin is said to be merely a madman, a former patient at the Rillafolles Hospital, with a fancied grievance against Professor Bombarda, the chief physician in charge of the asylum.—*Med. Rec.*

THE BROMIDES.—“The great popularity of Peacock's Bromides has led to the introduction of numerous substitutes, alleged to have the same composition and efficacy. While imitation is the sincerest sort of flattery, it has been demonstrated by careful chemical analyses made by prominent chemists that these preparations do not bear the faintest resemblance to Peacock's Bromides in composition, either as regards the purity of their ingredients or the presence of all the mixed salts.”

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THOSE COUGHS THAT HANG ON.—Few conditions prove such a source of worry and annoyance to patient and physician during the cold months as those obstinate coughs of bronchial origin. Not only is the cough a great bother but, if not checked, it is not unusual for a graver state—such as a

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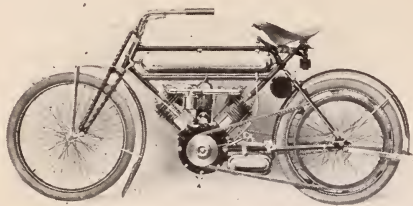
pulmonary tuberculosis—to follow. For the relief of “those coughs that hang on” Cord. Ext. Ol. Morrhuæ Comp. (Hagee) is a favorite remedy with thousands of practitioners. It takes the edge off the cough, soothes the irritated mucous membrane, and so builds up general health as to increase markedly the bodily resistance to other and more serious diseases. Cord. Ext. Ol. Morrhuæ Comp. (Hagee) is a potent yet palatable cod liver oil preparation.

DR. BOMBARDA, the well known alienist and neurologist of Lisbon, was not only a keen politician, but he was also a widely read, courteous and liberal minded man of science, whose friendship and kindness were well known.

His death will be sincerely regretted by all, and through it the Republican party in Portugal has lost a staunch adherent and an able and respected leader.

ELIXIRS DE LUXE.—Parke, Davis & Co. announce some important improvements in their line of medicinal elixirs, a line numbering more than one hundred and twenty-five preparations and highly esteemed by physicians on the score of therapeutic excellence. The improvements cited are in manufacturing processes, in the interest of palatability, permanence and physical appearance. They are set forth at some length in the current issue of *Modern Pharmacy*.

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VIVISECTION.—Dr. W. B. Cannon, of Cambridge, Mass., read before the Massachusetts Society an interesting paper on the Responsibility of the Physician for "Freedom of Medical Research," of which the following is an essential part. That progressive periodical, the *Louisville Medical Progress*, presents the entire paper in the September number.

Through agitation by the opponents of animal experimentation there was passed in England in 1876 a legislative act placing upon medical investigators certain well-defined restrictions. Concerning these restrictions Huxley wrote as follows:—

"So it comes about that, in this year of grace 1877, two persons may be charged with cruelty to animals. One has impaled a frog, and suffered the creature to writhe about in that condition for hours; the other has pained the animal no more than one of us would be pained by tying strings around his fingers and keeping him in the position of a hydropathic patient. The first offender says, 'I did it because I find fishing very amusing,' and the magistrate bids him depart in peace—nay, probably wishes him good sport. The second pleads, 'I wanted to impress a scientific truth with a distinctness attainable in no other way on the minds of my scholars,' and the magistrate fines him five pounds."

"I cannot but think," Huxley added, "that this is an anomalous and not wholly creditable state of things."

The English Act has now been enforced for 33 years, during which time it has in some instances seriously interfered with medical research. Work of the first importance has been stopped in England, and Englishmen have been compelled to go abroad in order to carry investigations of great practical value. I need only mention the names of Lord Lister and Sir Lauder Brunton as instances of medical men whose investigations have been hindered through the English Act.



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The English Act requires that all experimental work on animals shall be done in specified places and shall be subjected to scrutiny by government inspectors. These inspectors have recently reported that during the entire period of inspection they have failed to find any instances of cruelty in the conduct of animal experimentation in Great Britain.

In spite of the enforcement of such drastic legislation as was obtained in England in 1876, there has not been the slightest diminution in agitation against animal experimentation—indeed, England may be regarded as the centre of this agitation. There are no less than 15 antivivisection societies in England, and every one of them stands for the abolition of the use of animals in medical investigation. The English experience is, therefore, highly significant as to the probable future of this agitation. Just as our forefathers had to carry on the long struggle which has resulted in the legalized use of human bodies for medical and surgical instruction, so are we concerned with a similar long struggle for freedom of medical investigation.

Doctor: "Your tongue, please."

Patient: "What's the use, doctor, no tongue can tell how bad I feel."

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THE ALIENIST AND NEUROLOGIST.

VOL. XXXII.

ST. LOUIS, MAY, 1911.

No. 2.

SALOME THE NECROPHILE.

BY C. H. HUGHES, M. D.,

Retired Professor of Psychiatry, etc., Editor *Alienist and Neurologist*.

Salome the Scorned Woman and Herodias the Denounced.

THE necrophile and the scorned woman are well illustrated in this remarkable and literarily unique opera.

Love is here hideously transformed into reckless morbid lubricity, lasciviousness and gloating erotic nymphomaniac passion on the part of Salome; insane revenge of one, sane vengeance on the part of the other, as the author, taking liberties with the Bible story, especially as to Herodias in his horrible portrayal, shows:—

“Hell has no fury like a woman scorned,” even in the saner feminine life, but here is gloating lascivious vengeance satisfied and morbid erotic necrophilia both combined, giving us an unique portrayal of pathic sexual life, as it is known to alienists and neurologists in certain phases of erotic nymphomania and satyriasis. The killing and violating of the dead, though not so common as the ravishing and subsequent killing to escape danger of testimony of the crime, are well known facts of the morbid psychology of man’s sexual sphere perverted.

But here is a woman, loving to distraction, killing or having killed for the erotopathic revenge of rejected love, a rejection accompanied with scorn, reproach and denunciation, erotically caressing the lifeless head and fervently kissing the unresponsive dead lips while the blood drops from the severed neck of her amorously and revengefully murdered victim.

The horrid picture is true to the morbid life of the few, but unique, in erotopathic psychology. It is a great portrayal of lascivious unlicensed love, morbid passion, revenge and vengeful gratification and pathic post mortem love requital. It will live in the literature of exceptional phases of erotopathic psychopathology and as an illustration of the extreme of reckless, lustful, insane passion and insane blood lust, and also as to the exceptional extreme of hate which, without extenuation of scorned, rejected love, woman like, Herodias can go when their love alliances are denounced.

It is fitting that Oscar Wilde's not unintellectual, but possibly distorted mind, should have written it.

The play has the musical setting of a master hand in showing the exalted violence of perverted erotic human emotion. Miss Garden's portrayal is perfect and might not be mal apropos in a dissecting room drama before an audience of experts in the study and comprehension of psycho-pathologic perversion. But before an audience of the elite of modest feminine society, it must tend to take the veneer and the enamel from normal erotic civilized emotion, not always so deep as is assumed, and reveal in horrid hideousness, the beastly barbarism of the love life, of perhaps more than are suspected, of the excessively erotopathic.

The love passion is fed by environment and visual, aural and other sensual impression, as well as from within and it were well for normal erotic chastity, that obscene post mortem blood lust scenes, such as portrayed by Salome, even though true to morbid nature as this one is, should in the interest of a sound and healthy public policy, be kept off the popular stage. The character of Herodias throws light on the morbid passionate heredity, probably dowered upon the unfortunately endowed Salome through her mother and is a lesion of

psychopathic erotic transmission, which it were better to have portrayed for professional, rather than popular, inspection, like some of the pictures of real love life perverted, as they may be seen in Krafft-Ebing's, Moll's, Noltzing's and Ellis' books and in the medical writings of Clevenger and Lydston.

Wherein this *Salome* is the fictional erotopathic necrophiliac creation of Oscar Wilde's brain, is apparent by comparison with the biblical record of fact showing the beheading of John the Baptist to have been accomplished through the vicious, murderous vengefulness of an offended woman. Herodias the widowed wife of Herod's brother, the object of John's denunciation, might yet have been a man and her bloody vengeful demand might have been the same.

In this perverted salacious production the suicide act of Naraboth, because of the fear of Herod's wrath, is condemnable, as all acts and suggestions of suicide in plays and dramas for light and transient causes, should be condemned. Such suggestive representations are likely to be imitated, like press details of suicide often are. When suicide or homicide becomes a necessary part of a play, it were better that these deeds were done out of sight of the audience.

From the psychological standpoint of a correct public policy it is questionable whether even the public portrayal of the sacred crucifixion, as in the Oberammergau performance of the Passion Play, is wise in our day and generation, or that Judas' tragic death should be publicly shown, mythical as its manner was.

LIFE, MIND AND MATTER.

A Lecture,* Introductory to the Course in Psychiatry.

BY F. W. LANGDON, M. D.,

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THE dynamic inter-relations of life, mind and matter retain a perennial freshness of interest to thoughtful men; not only for those occupying the special view points of the biologist and psychologist, but also for the cosmologist and the philosopher in the widest sense of those terms.

To the physician, who must co-ordinate and utilize the labors of all these investigators, and of others, the subject is of never-ending importance. I have thought, therefore, that a brief review of some of the problems arising from a contemplation of those processes or manifestations to which we apply the terms "Life" and "Mind" may properly serve as an introduction to a course of lectures on psychiatry, devoted, as it is, to the study of their *disorders*.

To expect to throw any real additional light on these problems would be, of course, presumptuous on my part. Rather may I liken my effort to that of the photographic artist, who without actually increasing his illumination, may attempt to so distribute and adjust it to his subject as to lessen the contrasts while he strengthens the harmonics of his picture.

The study of mind and its relations has been thought worthy of the best efforts of the ablest philosophers of all ages.

*Delivered October 3rd, 1910.

It is obviously a complex subject. Sometimes it seems to be made more complex by reason of the strenuous efforts of the psychologists to elucidate it. It seems eminently desirable therefore to reduce its leading principles to their simplest terms, if we are to utilize them readily as a basis for thought.

If we visit some quiet woodland pool or sluggish brooklet at the proper season, scoop up a little of the water and "muck," take it home and examine a few drops of the mixture under a low-power objective, we may find in the field of our microscope a tiny mass of a jelly-like, somewhat granular substance; perhaps several of them.

Selecting one of these for observation, we note that *it moves without apparent cause!* Why? It is "alive" we say, or "it has life."

We state what is to us *an ultimate fact!* Science can deal only with facts and relations of facts.

To the material of which this simple organism is composed we give a name: *Protoplasm*.

This individual mass we call a "cell;" and as it is but *one* mass, apparently acting independently of all others—we call it a "unicellular organism"—a "monad" for short.



(Fig. 1.)

Observing our monad which you readily recognize as an *Amæba*, we may note that in the course of its slow, apparently purposeless movements, it comes in contact with a tiny grain of sand. What happens? It *shrinks away* on that side—seems to contract, until it is no longer in contact with the mass of innutritious rock—which we call a "grain of sand." We may observe that, as it shrinks or contracts on that side, it becomes a little fuller or expanded in some other direction.

Continuing to observe its movements, we see that it comes in contact with another minute mass of matter.

Instead of shrinking or contracting from this, it remains

in contact with it. Not only this, but it flows out, so to speak; projects its substance on either side of this second mass, so as to embrace it between two projecting "arms" or "feet" ("pseudo-podia.") These meet at their extremities so as to enclose the foreign matter. *It is now within the monad*, instead of on its surface. We say the Amœba "behaves differently" to different substances! Why? Well, we would find on examination that the second mass was a nutritious substance—probably a small bit of macerated vegetable matter. It is food!

Suppose we stop here and ask ourselves, "What *processes or powers* have been manifested by our monad? First, it evidently has experienced "sensations" which have been followed by "motions." In one case, motions *away from* the object causing the sensation; in the second instance, motion *toward* that object. It is evident that there is "discrimination" and "power of choice" as shown by the rejection of one and the acceptance of the other.

Consciousness (co-knowledge) is perhaps implied. The animal apparently *knows* its own needs and *knows* the means of satisfying them. It would seem strange to "discriminate" and "choose" between two things—if we did not "know" either, and did not know that *they were not us*.

"The pursuit of ends by the choice of means are the marks of mind's presence." (William James.)

Gauged by this standard the rejection of the sand and the enfolding of the organic food particle by our *Amœba*, presents all the essential "marks of mind's presence."

To sum up the results of these activities, they are: The attainment of *the ends pursued* by the *means chosen*.

Just at this point, suppose we ask ourselves: What is the relation of those activities which are collectively labeled "Life," with those we call "Mind?" According to Herbert Spencer "Life is the adjustment of internal relations to external relations."

Our monad has certainly accomplished this *adjustment* very effectively. It looks very much as though life and mind come pretty close together, in the animal series at least. It seems plain that matter must have life in order to mani-

fest mind. Whether it must have mind in order to manifest life is an open question.

While we have been observing the *Amœba* under the microscope, our glass of pond water, decayed leaves and other *debris* has been settling, and projecting from the sediment at the bottom, into the layer of clear water above is a twig upon which is perched one of those curious little animals, familiar to all of you who study biology, a *Hydra*. It is shaped very much like an ordinary glass goblet; is perhaps a quarter to half an inch in height and translucent or jelly-like in appearance. Its expanded "foot" clings firmly to the twig, and tapers gradually into a delicate "stem" which in turn supports the "bowl" of this living "goblet," from the edge of which project some freely moving "tentacles."

Some people would not think these animals of much consequence, but the Smithsonian Institution has thought them of sufficient importance to publish a large and expensively illustrated volume about them.

The importance to us of the *Hydra* and animals of its class, (Cœlenterata or sac-like animals) lies in their structure, and in the fact that they present the earliest development of a nervous system.

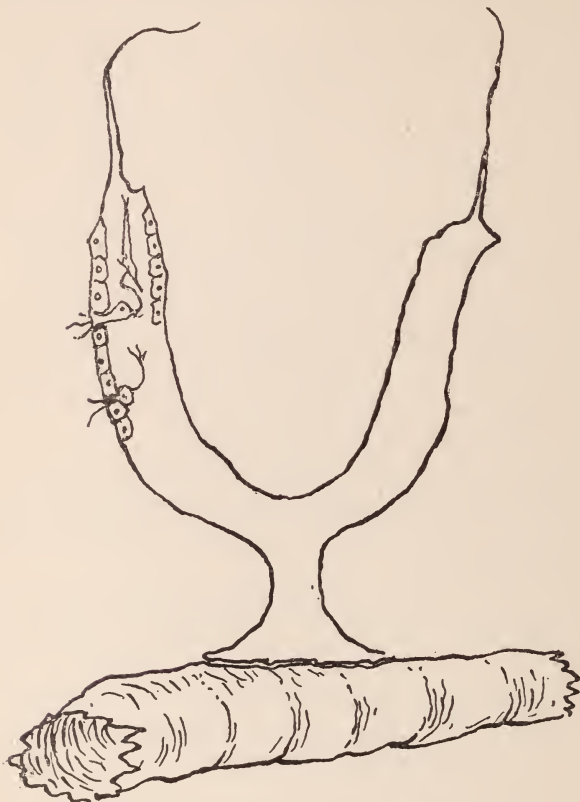
In structure they are *multicellular*, not *unicellular*, as was our *amœba*. Moreover the numerous cells of which they are composed are arranged in *two layers*, outer and inner (see diagram, Figure 2.) Amongst the outer or skin layer of cells are a number which present microscopic "processes" projecting beyond their surfaces into the surrounding water.

These cells also have another and longer process projecting into the body-wall of the animal and terminating in certain deeply seated cells, which are *contractile* in function—muscle cells in effect.

Now, how does this interest us? Just in this way. The cells with the projecting processes, external and internal, are nerve cells—"neurons."

By their externally projecting processes they recognize the presence of food—minute animalculæ and various organic particles—in the surrounding water.

This information is "conveyed" as a nerve impulse to the body of the neuron and through that to the muscle-ending process, where it influences the muscle to contract.



Structure of Hydra (diagrammatic.) (Fig. 2.)

Of what use is that? Well, the muscle cells are in connection with the bases of the aforesaid tentacles which, acted on by the muscle cells, thrash around in the water and curl inwards towards the body cavity, thus conveying such of the animalculæ as are within reach to the body cavity, where the lining or "digestive" cells "do the rest."

This earliest type of neuron, we observe, is both "sensory" and "motor" in function.

Bearing in mind the fact that the Hydra is a "fixed"

animal, which cannot pursue its food, we may readily perceive that starvation would be its fate, without neurons to recognize the food and to act upon the muscles so as to capture it.

Still higher in the zoological scale we come upon animals who possess separate groups of neurons for receiving sensations and stimulating motion, a *bi-neuronic class*, as the insects for example. Finally, we reach the vertebrates, in which, as we all know, the neurons are still more numerous in type; sensory, motor, co-ordinating, associative, psychic, etc.

Given a thousand of the simpler organisms already described, unicellular or multicellular as the case may be, no two exactly alike, in accordance with the "law of variation;" no two *acting exactly alike*, some quicker, some slower, some usefully, some uselessly, suppose some reversed the usual process, enfolded the sand and rejected the food; or repelled the food and drew in the non-nutritious particles. It is not difficult to decide which group would survive and transmit to their descendants in accordance with the "law of heredity" the tendency and power to feel, to know, to choose, to act *rightly*.

It seems a very simple proposition; the organic law of "survival of the fittest" and elimination of the unfit or the less fit. It applies from monad to man, from savage to philosopher.

* * * * * *

The first thing *that happens to us* after we make our advent into this world of joy and trouble is, *we receive a sensation*.

Evidently, to judge from results, it is an *unpleasant sensation*; due naturally to our translation from a bland un-irritating fluid at a temperature of 100° F, to a harsh, dry, cold atmosphere at 60°, 70° or 80° F, and the contact of more or less rough and irritating hands, blankets, towels; etc. The first thing *we do* after said advent is to yell. *If there had been no sensation there would have been no yell!* Then we are yanked about by the doctor, looked at critically, anatomically, physiologically and surgically, and passed to the nurse.

We signify our disapproval of the sensations aroused by these procedures and *yell again*.

When the nurse in the kindness of her heart turns us over on our back while the doctor drops some antiseptic into our eyes, followed perhaps by the nurse with some nice white soapsuds, we *yell* some more and *kick*. Then this benevolent and gentle looking nurse, holding us up in the air by our "hind legs" so to speak, introduces us into the first habiliments of civilization, possibly sticking a pin into our tender hide to see if we are alive; naturally we *yell* again and *kick* hard.

Most of us have been yelling and kicking ever since in one way or another. Now if there had been *no sensation* there would have been *no yell* originally and *no kick*.

If we ask ourselves the reason for all this activity and commotion, the answer is obviously "neurons;" but for neurons none of these activities would have happened to us. Neither would *we* have happened. Neurons, therefore, are objects of prime importance to us, as regards sensation and motion. By reason of them we evidently feel and act, which is all the infant requires to do for a time. Later, however, it is necessary for us to *think* in order to *direct our actions* to best advantage. This requires other neurons and muscles to act in concert or co-operation with the first mentioned.

If we were to start with a thousand human infants, chiefly occupied with yelling and kicking in different ways, and one hundred of them yelled and kicked *away* from their food habitually, it would be but a question of time when we would have nine hundred left yelling and kicking properly, *i. e.* in the *right* direction.

So it comes to pass that in those of us who have "grown up" existence is evidence, proof even, that we have "*yelled and kicked rightly*" most of the time. It seems a very simple proposition in vital dynamics, as inevitable as the law of gravitation.

Some may ask, "where does *intelligence* come in?" Intelligence is simply *our name* for "*right acting*," that is to say, to the ultimate advantage of the race. In a primitive state

of existence, say in the top of a tree, some infants might act so unintelligently as to kick with all four limbs at once, without first securing a tail hold. Naturally the result would be a damaged or dead monkey. Another might run *toward* a big snake, instead of *away* from it, with obviously undesirable results, *for the infant*.

In like manner the civilized infant by putting its finger into the fire, or falling down stairs a few times, if it escapes alive, learns to act "intelligently" with reference to those things and avoid them. It is evident that intelligence is not a *thing*; it appears very like a "mode of motion"—a necessary correspondence with life and mind. So far as the *fundamental nature* of these things is concerned, we cannot comprehend the nature of a simple sensation any more than we can that of the most complex thought or abstract idea, since they all imply *consciousness*. What we *know* regarding sensations is the paths which they travel to reach the nerve centres. How or where we become "conscious" of them is unknown. We do know, by mathematical measurements, that sensation precedes in time, both motion and thought. Hence it is the primary event in a conscious act. We are quite apt to assume, at first glance, that there is a radical difference in nature, between sensation and motion; and yet on final analysis *sensation* is simply *consciousness of arrested motion*. And *per contra*, viewed in the same light, motion is really to us sensation (consciousness) of *change of locality* of something.

Some assume the brain cortex, as a whole, to be the seat of consciousness, but this is not certain. Large portions of it may be destroyed and general consciousness remain.

Goltz, the German physiologist, removed the entire cortex of a dog, who still manifested consciousness of things in general. On the other hand, a lesion, a blood clot the size of a cherry or less, in some parts of the brain (*corpus striatum*) often abolishes consciousness immediately, though not permanently. The precise seat or limit of consciousness remains to be discovered.†

†Peterson has ingeniously postulated the *corpus striatum* as the seat of consciousness, with plausible, not to say convincing evidence. (Journal of Abnormal Psychology). 1908. Vol. 3, page 307.

To have a mind, man must have a nervous system. The use of the nervous system is to *make adjustments promptly and efficiently* to a more or less complicated environment. Animals whose environment is extremely simple do not *need* a nervous system, hence they carry on the functions of mind without it; as for example our *Amæba*.

How are "mind" and "matter" associated?

Conceptions of mind, as of life and other activities in Nature, have varied at different stages of human development, as the facts upon which the conceptions were based have varied.

Three modes of relation of the "dynamic principle" of mind to the material body and nervous system have been postulated.

The earlier philosophers viewed "mind" as an aggregation of spiritual or ethereal "powers" called "faculties." Thought, ideas, judgment, will, etc. being stored away in some physical sense in different compartments of the brain and "payed out" in response to needs or demands of the possessor. According to this the "spiritistic" view or "mind stuff" theory, persons were endowed with mind when they came into the world and kept it "stored up" until the time came to exhibit its actions.

Much as a store-keeper might sort out his physical stocks of spring, summer and fall goods, to exhibit them on his counters at the proper season. The spiritistic doctrine views each individual mind as a fixed, definite, though intangible mass, of essence or mind stuff pervading each brain and controlling its actions.

According to this view there would exist in Nature a varied assortment of "mind forms" to fit each species and each individual of that species, from monad to man.

If we assume an anthropocentric attitude and deny to the lower organisms the possession of mind, we would at least require a most remarkable variety of imperfect, deformed and damaged minds to fit the brains of idiots, insane persons and other human beings undeveloped, injured or diseased in their nerve centres.

In case of acquired disease or injury the corresponding

portion of "mind essence" would be useless for any purpose, without its correlated brain structure, for to make the "spirit" interchangeable would do away with the doctrine of individuality of mind.

The unused or discarded "fragments" would negative the law of conservation of energy, in that they could find no place for action, other brains being completely supplied.

These fragments would thus be temporarily in abeyance and without a home during the attacks of recoverable insanity.

We could hardly consider them as having escaped from the body and "merged" in a dynamic sense, with a "universal mind," since there would be no need for any such mind, if every organism were already completely equipped with mind, as the "Spiritistic Philosophy" implies.

Altogether we may say that the spiritistic or mind essence theory appears inadequate from a logical viewpoint.

Nevertheless even at the present day it suffices for the needs of a large portion of humanity.

A second theory of the relations of mind and matter is that of *psycho-physical parallelism*. This assumes that mind is a dynamic process, acting parallel with, but entirely distinct from, nervous energy and which can exist only in correspondence with such energy.

We might compare it, for illustration, to the workings of a useful domestic appliance in which water, flowing through a pipe under pressure, opens a valve, which turns on a flow of gas to heat the water. When the water stops, the valve closes and the gas flow stops. The water and the gas are independent items in a dynamic sense, do different work and never mix. Here the water flow represents the "mind force," and the gas the "nerve force," which does the ultimate work desired. Another simile would be that of the "magnetic flux" occurring at right angles to the axis of an electric current, and which ceases instantly when the current stops. In this instance the electric current would represent the "mind force," the "magnetic flux"—which turns the wheels, the "nerve force."

According to this view mind is *in* the nervous system

but not *of* it, nor produced by it as a whole or in part. It relieves us of one embarrassment which pertained to the "Spiritistic" theory, in that the "power" not used remains unseparated from the "universal power."

It has no "individuality" or "fragments" of such to be disposed of in case of damage to the "working machinery," the nervous system. The best that can be said of the theory of psycho-physical parallelism has been said by William James.

"Such a mere admission of empirical (psychophysical) parallelism, will thus appear the wisest course."

Yet on the same page he also says of this theory "although this is certainly only a provisional halting place and things must some day be more thoroughly thought out."‡

It is evident that even in its temporary acceptance he recognizes its inadequacy.

The third hypothesis to claim serious attention, is that of *psycho-physical interaction*.

Practically it may be stated as follows: All we need is to postulate a universe in motion, acting upon "sufficiently organized" organic material to develop all the phenomena of mind. Just as when the hammer strikes the iron, heat results, so the impact of the forces of Nature upon delicately adjusted structures, highly complex in chemical and morphological makeup, may give rise to some "modes of motion" differing from all others; the results of which are what we call, collectively, "mind."

We may compare the interaction theory of mind to the activities which we call a "battle," which is in reality the sum of the results when two armed bodies of men meet in antagonistic action.

No such *thing* as "battle" exists in the concrete, it is simply a convenient term to characterize the sum of results of two groups of opposing motions. Stop the motions and the battle is non-existent. According to the interaction hypothesis, arrest all vital function and mind disappears, or rather ceases to appear!

‡Principles of Psychology. Vol. 1, page 182.

The dynamic element remains unseparated from the "universal force."

In like manner remove all external "forces" and the most perfect neurons could not "produce mind."

Consciousness appears to us as an ultimate fact, apart from, and more incomprehensible than, any other process in Nature.

Yet we observe without special wonder a compound of four chemically united elements, (the molecule of nitro-glycerine), develop by reason of a blow, an explosive power sufficient to rend a mountain if the nitro-glycerine be enough.*

While both processes are incomprehensible to us, in their ultimate nature, it may be at least permissible to correlate the complexity and range of action of the dynamic results in each case with complexity and degree of evolution of the constituent materials concerned.

The study of the laws of dynamics teaches that the more complex the molecular constitution of a given substance, the greater is its instability, or liability to change its form and structure, with consequent liberation of its stored energy. This is particularly true of compounds in which nitrogen takes an important part. Looking at the nitro-glycerine in this light, with its four component elements *C, H, O, N*, we find that its explosion requires simply a slight concussion to liberate its gaseous elements, which immediately manifest their energies by an almost irresistible force.

We know that the force of *gravitation* may turn a wheel and by appropriate appliances be promptly transmuted into a subtle energy (electricity) which may be stored and handled at our pleasure, to furnish light, heat and mechanical power in most varied forms of application.

Is it not permissible to conceive that such forces of the universe as gravitation, heat, light, electricity and many others, acting continuously, silently, but irresistibly, upon a complex, delicate, unstable, but yet *responsive*, chemical compound, should give rise to very complex activities and produce results such as those we classify as "vital" and

*The writer is greatly indebted to Professor John Uri Lloyd for kindly revising the chemical comparisons here stated.

"psychic?" These being thus simply *names* for *results* of such interaction.

Compare again the sudden liberation of energy in the dynamite explosion and the simple chemical constitution of the molecules involved, with the persistent and far-reaching, continuous influence of those exhibitions of energy called "consciousness" and "constructive imagination," as evolved in the higher type of brain matter, with its 300 or more chemical (molecular) bodies and compounds with nitrogen as a necessary constituent.

The effect of the dynamite explosion may, as a shock, be transmitted for 20 or 50 miles, but the *effect* is practically *instantaneous* and is soon exhausted. While the more subtle and more varied "explosions" in "nerve tissue"—which we may correlate with "consciousness," may be repeated continuously and indefinitely. The effect may not only be transmitted instantly, but through ages of time, involve millions of living beings, and eventually reach (far reaching thought) the uttermost limits of our solar system and into the beyond.

Professor James has told us that we must "assume" that each mind is an "object in Nature" (probably for didactic purposes only).

I must confess that this does not in any way clarify my view. It appears an impossibility at the start. As well say that each "battle" is an object in nature, when it is really only our *name* for *results* of *interaction* between two opposing forces. No man ever *saw* a battle; it is not a *thing*. What we *may see* is the opposing elements in action; when their *motions* cease battle is non-existent. * * * * *

Will the present state of our knowledge permit us to come to any definite conclusion as between these three hypotheses? No. We may only decide as to the "weight of evidence" in any one direction. "Each one of us according to his lights."

In so doing we should reserve the right to reject all—in favor of some possibly entirely different formula, for which the foundation facts are at present lacking.

The discovery of a day may revolutionize the thought of the centuries, in this as in other respects.

The metaphysical of to-day may be the physical of to-morrow; witness the Roentgen rays and the emanations from radium.

Man is not a "finished product" but a *stage in a process of development*, of which we cannot at present foresee the end.

After all, to the philosophic organization, there is a certain satisfaction in the feeling that we are each a definite, though small, factor in an immense, harmonious scheme of action; some such feeling as animates the obscure member of a daring and powerful exploring expedition, who, feeling his importance as a part, yet is not burdened with responsibilities which might be beyond his powers.

At present it seems permissible to consider "mind" as *one group of life processes*, set apart by us in order that we may conveniently think of them as a whole.

In a poetic sense, mind may be viewed as *the Flowering of Life*.

As physicians, it seems wise and practical for us to think of life and mind as *modes of action and reaction* of organisms responding to external influences.

SADISTIC INSANITY(?) AND PSEUDO-EXPERTISM IN COURT.

A Medico-Legal Record With Comments.

BY THE EDITOR.

PSEUDO-EXPERTS in psychopathy make some egregious blunders on the witness stand, like the case of a pompous physician of the interior of Missouri who once testified to the existence of what he diagnosticated as "federal insanity" in the case of an ex-confederate who, shortly after the civil war, before matters had settled down to a permanent peace basis among the non-combatants, though the guerrillas and feudists had about all been called home, mustered out, disarmed and disappeared, would imagine "the Federals were coming" and run from his plow into the house with this exclamation, though no enemy was in his neighborhood. He had suffered from a suppurating gun shot wound in his elbow joint with a tox-hæmic sequent fever and delirium and was not long out of bed. He had killed a man, his friend, for a trivial matter, viz.: the refusing to change a five dollar bill and was really insane. For want of a better knowledge of the subject "federal insanity" was the local expert's (?) remarkable classification.

The following from the journal of the American Medical Association, October 29th, 1910, is another non-expert psychological designation employed to defeat the end of justice through pseudo-egotistic and erroneous alienistic testimony.

"The Supreme Court of Nevada says that in the case of State vs. Petty (108 Pac. R. 934) the defense relied on by the defendant for killing his wife was sadistic insanity. In support of this defense, he went on the stand and testified in his own behalf. He also called as a witness a Dr. H., who qualified as an expert, and testified, among other things,

to having made a physical examination of the defendant prior to the trial, and detailed certain physical conditions existing in the defendant, which, in part, formed a basis for his opinion that at the time of the killing the defendant was insane. For the purposes of rebuttal, counsel for the state requested the court to appoint three physicians and to order that the defendant be submitted to an examination by them relative to the physical conditions detailed in the testimony of Dr. H. Over the objection of counsel for the defendant, the order as requested was made, and three physicians were appointed by the court for the purpose of making the examination."

Counsel for the defendant contended that it was an error to order the examination of the defendant's person or to permit the physicians appointed by the court to testify to facts disclosed by such examination, for the reason that the purpose of such examination was to contradict the witness, Dr. H., for the purposes of impeachment, and, as Dr. H. had, on cross-examination, testified that he had not based his opinion on the physical symptoms of the defendant testified to by him, "except the typical degeneracy written on his face and head," his testimony relative to the defendant's heart and genitals was as to an immaterial matter, and hence could not be contradicted for the purposes of impeachment. But the court does not think that the testimony of the physicians appointed by the trial court could be regarded solely in the light of impeaching evidence. Dr. H. had testified at length as to the condition of the defendant's heart and genital organs, and it was not until cross-examination that he stated that he did not take into consideration the condition of these organs in reaching his conclusions as to the defendant's mental condition. Counsel for the defendant never withdrew this portion of Dr. H.'s testimony from the case or offered to have it stricken out. It was all included in the hypothetical question propounded to the witness by the defendant's counsel.

Sadism is a mental disease in which the sexual instinct is abnormal or perverted. Where this character of insanity is relied on, the physical facts, here claimed to be immaterial,

would very naturally be given some weight by the jury in the defendant's favor where it was shown by uncontradicted testimony that they were abnormal. The testimony of Dr. H. was that the defendant's heart and genital organs were abnormal, while that of the physicians appointed by the court was that they were normal. The court in ordering the physical examination of the defendant was careful to limit it to the points testified to by the defendant's own expert. If counsel for the defendant deemed these physical facts immaterial, he should not have offered testimony concerning them, but, having offered testimony of the existence of certain physical characteristics of the defendant, he was not in a position to object to the state offering testimony in reference to the same physical facts, and, as before stated, such testimony could hardly be held to be governed by the rules relating to impeaching testimony. At the time the order was made, it could not be told whether the investigations of the physicians appointed by the court would confirm the testimony of Dr. H. or not. The purpose of making the order was to enable the court to arrive, if possible, at the truth of the existence or non-existence of certain physical facts, which the defendant had introduced into the case in his defense, and not to impeach the defendant's witness. The mere fact that one expert witness may reach a conclusion different from that of another expert witness does not of itself impeach the former witness.

The objection to the testimony of the physicians appointed by the court was general, and went to all of their testimony, without specifying any certain portion thereof that was claimed to be immaterial. The examination also went to the head, including the mouth, teeth, and tongue, of the defendant, which were conceded to be material points. No specific objection to the testimony relative to the other alleged immaterial points was ever made. If such objection had been made, its over-ruling could not constitute prejudicial error unless the defendant withdrew or caused to be stricken out the testimony offered in his behalf concerning the same facts."

This is the first case of the kind we believe ever brought before an American or English speaking court, especially where

Sadism was offered as a plea of insanity and the confessed sadist murderer has plead his own blood-thirsty erotism in extenuation and defense of erotopathic murder.

LEGAL STATUS OF THE UNBORN.

BY JAS. G. KIERNAN, M. D.,

CHICAGO.

THE issues involved in this problem have important embryogenic relations deciding maternal impressions from anti-photographic standpoint. Pragmatically judges decide the question in defiance of the common law by illegally legislating that what is a fact in science is not a fact in law. The principle that offspring are a separate entity from their immediate ancestors is very obvious from the most meagre recapitulation of facts in ontogeny and phylogeny.

Reproduction of life is not the simple problem that popular cant solves with a platitude. Sex itself is an evolution, not an entity, hence reproduction does not depend on sex and in the lowest forms of life, whether in animal, microbe or plant, bisexual reproduction is absent; budding and fission take its place. Reproduction is here but a process of excretion following excess of assimilation and consequent overgrowth. In the types which link the protozoa through the polyzoa with the metazoa reproduction becomes gradually specialized; certain organs become devoted to certain functions. Virgin generation (parthenogenesis) later gives way to hermaphroditism as in the relatively high snail. As high as the bee, however, parthenogenesis remains in part. As high as man imperfect parthenogenesis occurs. The new being after being thrown off in fission passes to the colony stage; then to the egg stage without special maternal care; then to pouch hatching as in the back of certain toads; then to ovoviviparity (hatching before exclusion; the period of retention while living varying.) Then the egg is deposited in a pouch appearing for this purpose during a certain season as in the egg-laying mammals.

Then the imperfect animal is deposited in a pouch and suckles, but there is no after-birth as in the marsupial. Then an after-birth appears, but there is no allantois or maternal sheath for it as in the sloth. Then comes an after-birth and allantois as in the higher mammal. In all these phases the offspring is a separate being more or less shielded and nourished by parental environment, but undergoing its own stress with which the maternal organism except as affecting after-birth and allantois has naught to do. Biologically the unborn is, therefore, a separate being. Legally the question is involved by judges in many contradictions. Common law starting from the rights of the individual to the judgment of his peers makes the question one dependent on evidence.

Unfortunately into common law judges have illegally injected much special pleading and repealed dead statutes, canon and Roman law foreign to humanitarian justice of the common law. The contradictions therefrom arising appear very evident in the Illinois Appellate Court decision in *Allaire vs. St. Luke's Hospital of Chicago* and in the trial Judge Kavanaugh's decision in *Palmquist vs. Chicago City Railways Company*. The decision of the Appellate Court is as follows:

On or about the 2nd day of February, A. D., 1896, at and in the said city, said defendants were possessed of and using a certain building there situated as a hospital for the care, curing and treatment of sick persons, and of ladies therein, during the time before, at and after accouchement and parturition and until convalescence thereafter, and for the care, careful treatment and medical diligence in the safe delivery of infants in *ventre de sa mere*, all for hire and reward in that behalf. And the said Ada A. Allaire, then within ten days, as near as may be, for the natural birth of plaintiff, as the said defendants then and there well knew and had knowledge, then and there, on said last named day, at the request and solicitation of the said defendants, for hire and reward in that behalf to be paid by her, became and was a patient of said defendants, in said building, therein to be carefully kept, cared for, housed and medically treated until the birth of plaintiff, and during her convalescence thereafter; and for such hire and

reward so to be paid, then and there became and was such patient of defendants, for the use and benefit of plaintiff, in that he also should receive from said defendants all due care and treatment, and should be safely delivered by birth, in the course of nature, without personal harm.

And thereupon it then and there became and was the duty of defendants to carefully and comfortably house, shelter and keep the said Ada A. Allaire in said building, and to extend to and bestow upon her person great care and diligence before, during and after plaintiff's birth. All this for the well-being of the said Ada A. Allaire, as also for the benefit of the plaintiff, to the end and purpose that he also should receive great and due care from said defendants and be naturally born of his mother, without injury or harm to his person.

And the plaintiff further avers that before, on and after the day first aforesaid, at and in the said building, the said defendants were possessed of and using a certain elevator, so-called, for the conveyance of patients therein through a shaft from one floor of said building to other floors therein; and the said Ada A. Allaire, then being such patient, as aforesaid, on said day last named, and in obedience to defendants' request and direction so to do, entered into said elevator and upon the floor thereof, and then and there sat down upon a common, all-wooden chair on said floor, that had there been placed in its then position by defendants, to be carried and elevated thereon from the second floor of said building to the floor of the obstetrical department thereof above said second floor, she then and there being assured by defendants that it was and would be perfectly safe for her to be seated in said chair in its then position, to be carried upward in elevator, and that no harm could come to her for so doing, defendants then and there well knowing that said Ada A. Allaire was then and there near to confinement for the natural birth of plaintiff.

And thereupon it became and was the duty of defendants to have and keep said elevator and shaft and each and every part thereof, in a proper, safe and secure condition, and to keep the said mother of plaintiff and the plaintiff, safely and without personal harm or injury in the use and enjoyment thereof and to so place and condition the said mother therein and

upon said floor and chair, as that neither she nor the plaintiff, then in *ventre de sa mere*, should in any way be injured or personally harmed while therein and being carried thereby to said floor above, whither the said mother was then and there directed by defendants. Yet the defendants did not, nor would regard their duty in that behalf, but on the contrary thereof, negligently and carelessly, at the place and on the day last named and when and while the said mother of plaintiff with all due care on her part, was then and there so conditioned and seated in said chair and being rapidly carried upward in said elevator, failed and neglected to have and keep said shaft, elevator and chair in a safe and secure condition and position, and to have and keep the car of said elevator enclosed, and then and there, carelessly, negligently and heedlessly failed to properly load and operate said elevator, and did then and there so carelessly and negligently operate the same that when and while the said Ada A. Allaire was so being rapidly carried upward therein and thereon, the top of said chair, suddenly and with great force, struck a projection in and on the side of said shaft, whereby said chair, with said mother thereon sitting, was instantly and with great power, crushed to the floor of said elevator car, said car then and there being unenclosed and open, and said mother of plaintiff and the plaintiff then and there with great force and violence thrown and hurled from and off said chair to the floor of said car and to the edge of said floor opposite said chair, and by reason thereof and the swift upward motion of said elevator car, the left limb of said mother was then and there and thereby, thrown and caught between the edge of said floor and a projection in said shaft, was then and thereby greatly cut, mangled, bruised, and the bones thereof broken, and said mother greatly and grievously bruised, hurt, jammed and wounded in her left hip, thigh, side and body, and other great personal injuries, by reason of said negligence of defendants, said Ada A. Allaire then and thereby received and sustained; and that said mother, by reason of her said personal injuries, and the manner, way and time in which the same were so received and sustained, was then and there put in great terror and fear that death was then for herself and plaintiff, then unborn. So that and thereby, and

as the direct, proximate and natural cause of said injuries to his said mother, said plaintiff was then and there, and by reason of defendant's said negligence, greatly injured, strained, bruised and wounded in his left limb, left side, left hip, left arm and left hand, so that at his birth on the 6th day of February, A. D., 1886, his left foot, left limb, left side and left hand were, and became, and hitherto have been, and still are, wasted, withered and atrophied, and his said foot smaller than natural by more than one-half, and made thereby to turn inward and the sole thereof upward, and his said limb shorter than natural by more than four inches, and his said hip, side and arm, by reason of said negligence and injuries, became and are made shrunk, atrophied and paralytic, and his said limb without flesh thereon, and from thence hitherto have so been and still are, and said plaintiff thereby greatly and sadly crippled for life, and in endeavoring to be cured and healed of his said injuries, has laid out and expended the sum of two thousand dollars (\$2000) and more (the said Ada A. Allaire having heretofore, for a valuable consideration, settled with the said defendants for, and released them from, all damages from said injuries to herself alone), to the damages of the plaintiff in the sum of fifty thousand dollars (\$50,000), and therefore he brings his suit," etc.

A general demurrer was filed by the defendants, which was sustained by the court, and judgment was rendered for the defendants.

The action is not given by any statute, and if maintainable, it must be so by the common law, and therefore the question is, whether at common law, the action can be maintained. Had the plaintiff at the time of the alleged injury, in contemplation of the common law, such distinct and independent existence that he may maintain the action, or was he, in view of the common law, a part of his mother? If the former, it would seem the action can be maintained; but if the latter, not because, if part of his mother, the injury was to her and not to the plaintiff.

Appellant's counsel has argued the case learnedly and with not a little industry, but has cited only two cases in which it was attempted to maintain actions involving the

question presented here, namely: *Dietrich, Administrator v. Inhabitants, etc.*, 138 Mass. 14, decided in 1884; and *Walker v. Great Northern Ry. Co.*, 28 L. R. (Ireland) 69, decided in 1891.

In the former case the facts were that the mother, when advanced four or five months in pregnancy, slipped and fell by reason of a defect in the highway, the consequence of which was a miscarriage. The plaintiff was alive when delivered, but was too little advanced in foetal life to survive its premature birth. The action was brought by the administrator of the deceased infant under a statute authorizing an action for the benefit of the mother or next of kin.

The trial and Supreme courts both held that the action could be maintained, the latter court saying: "Taking all the foregoing considerations into account, and, further, that, as the unborn child was a part of the mother at the time of the injury, any damage to it, which was not too remote to be recovered for at all, was recoverable by her, we think it clear that the statute sued upon does not embrace the plaintiff's intestate within its meaning."

In *Walker v. Great Northern Ry. Co.*, the statement of claim was, substantially, that Annie Walker, the mother of the plaintiff, while quick with child, viz., the plaintiff, became a passenger on the defendant's railway and was so received by the defendant, and that the defendant so carelessly and negligently conducted itself in carrying said Annie Walker and in managing its railway, that the plaintiff was thereby injured, crippled and deformed. A demurrer was sustained to the statement of claim, all the judges concurring in the opinion that it was defective in not showing a contractual relation between the plaintiff and the railway company, but merely averring a contract between the mother of the plaintiff and the company. The question, however, whether such an action could be maintained by an infant, in its mother's womb at the time of the alleged injury, could, under any circumstances, be maintained, was discussed elaborately and with great learning both by court and counsel. O'Brien, C. J., after discussing the question, expressly declined to commit himself by an opinion, leaving it, as he said, "an open ques-

tion" so far as he was concerned. Harrison J., while basing his decision on the insufficiency of the statement of claim, says, in his opinion: "When the accident occurred, on the 12th June, the plaintiff was still unborn and had no existence apart from her mother, who was the only person whom the defendants contracted to carry on their line," etc. Johnson J., in his opinion says: "As a matter of fact, when the act of negligence occurred, the plaintiff was not *in esse*, was not a person, or a passenger, or a human being. Her age and her existence are reckoned from her birth, and no precedent has been found for this action." Again commenting on the claim of liability, the same learned judge says: "If it did not spring out of contract it must, I apprehend, have arisen, if at all, from the relative situation and circumstances of the defendant and plaintiff at the time of the occurrence of the act of negligence. But at the time the plaintiff had no actual existence, was not a human being and was not a passenger; in fact, as Lord Coke says, the plaintiff was then *pars viscerum matris*, and we have not been referred to any authority or principle to show that a legal duty has ever been held to arise toward that which was not *in esse* in fact, and has only a fictitious existence in law, so as to render a negligent act a breach of duty."

O'Brien, Associate J., in his opinion, says of the action: "It is admitted that such a thing was never heard of before; and yet the circumstances which would give rise to such a claim must at one time or another have existed." In *Dietrich v. Inhabitants, etc.*, *supra*, the court says: "But no case, so far as we know, has ever decided that if the infant survived it could maintain an action for injuries received by it while in its mother's womb." Appellant's counsel substantially admits that there is no precedent for the action. While it is true that this is not conclusive that the action may not be maintained, yet, in view of the fact that, as said by Mr. Associate Justice O'Brien, similar circumstances must have before occurred, it is entitled to great weight, especially when the right to maintain the action is, to say the least, doubtful. Mr. Associate Justice O'Brien, in *Walker v. Great Northern Ry. Co.*, says: "The law is in some respects a stream that

gathers accretions with time from new relations and conditions. But it is also a landmark that forbids advance on defined rights and engagements; and if these are to be altered, if new rights and engagements are to be created, that is the province of legislation and not decision." In this we fully concur. That a child before birth is, in fact, a part of the mother, and is only severed from her at birth, cannot, we think, be successfully disputed. The doctrine of the civil law and the ecclesiastical and admiralty courts, therefore, that an unborn child may be regarded as *in esse* for some purposes when for its benefit, is a mere legal fiction, which, so far as we have been able to discover, has not been indulged in by the courts of common law to the extent of allowing an action by an infant for injuries occasioned before its birth.

If the action can be maintained, it necessarily follows that an infant may maintain an action against its own mother for injuries occasioned by the negligence of the mother while pregnant with it. We are of the opinion that the action will not lie.

Justice Windes dissenting:

What was said by the learned judges in deciding the cases Dietrich, 138 Mass. 14, and Walker, 28 Law Rep. (Ireland) 69, in so far as those opinions may be applicable to the case at bar, was by way of argument, and, in my opinion, not necessary to the decision of the particular questions in those cases, and therefore not authority as precedents in the solution of the question here involved, except to the extent that the argument appeals to reason. In the Dietrich case the mother of the child was between four and five months advanced in pregnancy, and the child was too little advanced in foetal life to survive its premature birth, died before it was separated from its mother, and was not directly injured, unless by a communication of the shock to the mother, nor was there any contract between the mother and the defendant which in any way related to the child or for its benefits in any respect. The court might well have held that under all these facts an action could not be maintained, without deciding broadly, as it did, that no action would lie for injuries received by the child while in its mother's womb. The opinion seems based largely

on the fact that no decided case had ever held that such an action would lie, and for the further reason that the child was a part of the mother at the time of the injury.

In the Walker case there was no notice to the defendant railway company that carried the mother as a passenger, of her condition, and the contract of carriage, out of which its duty, if any, to the child arose, was made without any reference to the unborn child. This case might well have been decided, as it was by the learned Chief Justice, solely on the ground that there were no facts set out in the statement of claim which fixed the defendant with liability for breach of duty as carriers of passengers. The railway company, having no notice of the condition of the mother or the child's existence within her womb, it might well be said, so far as concerned the company, the child was a nonentity. Not so, however, in the case at bar, where the mother contracted with the defendants with express reference to her condition, her confinement being imminent, and necessarily, in the nature of things, her contract was with reference to her unborn child and its care.

At the common law it is well settled that one is liable as for murder or manslaughter, according to the particular facts of each case, when he willfully and maliciously injures a child in its mother's womb, and death of the child results from such injuries, provided it be born alive. In the Walker case, *supra*, the learned Chief Justice quotes from Blackstone's Com., viz.: "In all cases the crime includes an injury; every public offense is also a private wrong and somewhat more; it affects the individual and also affects the public

Upon the whole, we may observe, in taking cognizance of all wrongs or unlawful acts, the law has a double view, viz., not only to redress the party injured, by either restoring him to his right if possible, or by giving him an equivalent, but also to secure to the public the benefit of society by preventing or punishing every breach and violation of those laws which the sovereign power has thought proper to establish for the government and tranquillity of the whole." Also from Stephen's Com., referring to the commission of crimes amounting to felony, viz.: "There still exists the remedy for the private

wrong; even in cases of felony it is only suspended during the prosecution of the crime."

If the willful and malicious conduct of a person causing an injury to an unborn child resulting in its death, after it has been born alive, will fasten on that person the crime of murder or manslaughter, there seems to me no sound and logical reason, since the crime includes the injury to the child, and since the public offense is also a private and special wrong to the helpless infant, why, if the child should be so fortunate as to survive the injury, which, had it caused death after being born alive, would have made the wrong-doer a criminal before the law, the child should not have his action at law against this same wrong-doer for damages because of his tort.

It is the boast of the law that for every wrong it provides a remedy, but the law which says to the helpless infant, "If your injuries were inflicted, however wrongful, while you were sleeping peacefully in your mother's womb, though pulsating with life and vigor, or while you were moving forward to the outer world in obedience to nature's law, with a power almost irresistible, though just beyond the light of day, still a part of your mother, there is no remedy for your wrongs, if you live through them, though crippled or deformed for life, but if you can only die because of your injuries, the man who wronged you shall be indicted for murder and punished," gives but scant recompense, gives no practical redress, no adequate remedy to the wronged child. Such law is a reproach to civilization. It seems illogical to say the action cannot be maintained because the child is a part of the mother. Long before it sees the light it is a living soul, pulsating with life, making its presence known by most vigorous action oftentimes, a distinct entity moving and having its being, though carried by the mother and attached to her by the umbilical cord. Why may it not be wronged? Why may it not suffer injuries? It cannot be contended for a moment that the physician attending at the birth of a child would not be liable in damages to the child, if, after delivering it from its mother, but before he cut the connecting cord, he should willfully and maliciously wrench off both its arms. Could it be said that such an injury was to the mother, and that she must sue for and recover

the damages to her child in such a case, because the doctor had not severed the umbilical cord—because the child was still a part of the mother? I think not. Could it be successfully contended that for an injury to Chang, one of the famous Siamese twins, he could not maintain an action because he was a part of his brother Eng—that he was not a separate entity? I think not. Could it be contended that in such case Eng was the person to bring the suit, because the injury to his brother Chang was an injury to him, Eng? I think it quite as reasonable to say that the mother can recover for injuries to her living, moving child, because contained in her womb or lying beside her after its birth, attached by the umbilical cord, as to say that in the case of an injury to one of the Siamese twins, the other could have brought suit. History informs us that one of these twins survived the other several hours, and medical authorities give numerous instances of living children being delivered from their mothers after life was extinct. The child, when capable of being born alive, is, in my opinion, a distinct entity, under the common law, and although no decided civil case, so far as we know, has so held, humanity and enlightened civilization demand that the common law, as administered in Illinois in the nineteenth century, should so declare. I therefore think that though there is no precedent—no decided case like the one at bar—there is no good reason, as matter of law, why the action will not lie in behalf of this appellant.

The majority of the Illinois Supreme Court took the view of the majority of the Appellate Court, one judge agreeing with Judge Windes.

In the case of *Palmquist vs. the Chicago City Railways Company* in which I was called by Chase R. Rankin, a woman about three months and a half pregnant was the victim of a collision accident. She became neurasthenic, but went to term and bore a quickly dying child which in the opinion of Drs. Max Herzog and F. R. Zeit was arrested just ere the period of sex differentiation.

Sex as Drusing's biologic studies have shown is not an inheritance but the result of various factors acting not only at the time of impregnation, but at various times thereafter.

Long after impregnation when the embryo is already developed nutrition is still influential and may change the tendency even after the sexual organs have developed. The plaintiff sued the railway not only for her own injury, but for the loss of the child. On motion of the company's attorney Judge Kavanaugh excluded the issue of the child from the consideration of the jury on the ground that the company had not contracted for it as a passenger, hence there was no remedy for its loss. Herein he disagreed with the doctrine laid down by the majority of the Appellate Supreme Court and also partly with the doctrine laid down by the Massachusetts Court in the Dietrich case. There is decided obscurity in judicial doctrines as to the legal status of the unborn; an obscurity which could be cleared up and justice done by leaving the whole question to the jury under common law rules of evidence.

TRAUMATIC SPINAL MONOPLÉGIA WITHOUT VISIBLE TRAUMATISM.

By C. H. HUGHES, M. D.,

ST. LOUIS.

MANY railway surgeons deny the possibility of grave spinal injury, as asserted by Erichson for example, without sensible traumatism, notwithstanding surgery originated and all believe in the verity of the *contre coup* theory of brain injury even without cranial fracture. S. Orłowsky (*Neurologische Centralblatt*, Oct. 1st, 1901) reported the rare case of an injury to the pons without injury to the cranium other than a violent stab wound which did not penetrate the skull. No precisely similar case has been placed on record since. The patient had paralysis in the right facial region, paralysis of the abducens, convergents trismus and diplopia, loss of hearing on the right side, inability to stand or sit, complete loss of co-ordination in the right leg and arm, anaesthesia of the left half of the trunk and left extremities. The patient slowly improved and the symptoms gradually disappeared, except the changes in the oculo motor nerves and facial, which remained permanent. The author concludes that concussion involving the medulla oblongata caused the mischief though no wound penetrated the skull.

I, many years ago, saw a case in Coroner Boislinier's time and with him, where a blow with a tin pail behind and above the left auditory meatus fractured the left meningeal artery, causing instantaneous hemorrhage and immediate death without external fracture of the skull. This case made a profound impression on my after views, for I assisted at the autopsy. I have seen similar cases since of brain injury without cranial fracture. An interesting paper* read before the surgical

*On the immediate and remote effects of brain injury.

section A. M. A. at St. Paul in 1910, reflected my own experience on this subject. A few similar experiences have brought me to similar conclusions respecting spinal cord injuries without implication of the bony incasement of the spinal marrow.

The same law as to immediate and remote effects of concussion violence applies to the spinal cord as to the brain. The cerebro-spinal fluid may be similarly disturbed by concussion. The same or similar neuro-molecular violence may result. The argument of the secure transverse ligamentous attachments, the surrounding watery cushion, the suspension of the cord as in a jar special pleading, applies no more to the spinal cord in the vertebral canal than to the brain with its cushioning ventricles, perivascular and subarachnoid fluid spaces. Cerebro-spinal fluid is a conservative investment, for more purposes than one, doubtless, of nerves, arterioles, brain and cord, but it does not always secure these parts from effects of violence any more than the investing skin or mucous membranes entirely and always protects the parts they invest from injury.

The case we now have to record occurred in the practice of Dr. Meng of this city (St. Louis). It relates to the spinal cord and is yet more conclusive of the fact than any of Erichson's cases or of any other in the records with which we are familiar. It ought to set at rest, in the minds of all doubting Thomases, the question as to whether the spinal injury without sensible external wound, may cause grave cord lesion. A young man employed as a salesman in a retail shoe store carrying a box of shoes weighing several pounds on his shoulder, was descending or ascending a ladder when the ladder broke, precipitating him some twelve feet to the ground floor, the box sliding down and injuring his spine in the lumbar region. The young man was unconscious for a time and helpless and later suffered great pain. After consciousness returned it was found that he was entirely helpless in the right arm and forearm, hand and lower limb. After a time the use of the right hand and arm were regained but to this day the right leg and thigh are completely paralyzed. The patellar and plantar reflexes were impaired and never fully returned. He has to lift the right leg with his hands to cross it over the left (11 : 11

quires the use of a crutch in order to get about. He handles himself well with his unaffected limbs and has never had any alternate paralysis of either motion or sensation. He is not in any sense neuropathic, aside from the direct local results of the injury. He is a vigorous, manly, unemotional matter-of-fact young man, without a suggestion of the hysterical diathesis. The sensible injury is in the second, third and fourth lumbar areas and the right side peripheral nerves emerging therefrom involving their motor and sensory fibers and clearly traceable to the fall and spinal violence. He has no previous history of neuralgia, neuritis, paralysis or grippe. The upper and cervical spine showed no external sensible trauma.

MEDICAL ASPECT OF BOSWELL'S "LIFE OF JOHNSON," WITH SOME ACCOUNT OF THE MEDICAL MEN MENTIONED IN THAT BOOK.*

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Abstracted and Abridged by the Editor.

WHEN reading the vivid account that Boswell gives of his great patron, one cannot help being struck with the great amount of bad health and physical suffering that the "great lexicographer" endured. When in his seventy-fifth year he wrote to his life-long friend Hector, a surgeon at Birmingham, that his health from his twentieth year had been such as seldom afforded him a single day's ease, one is forced to the conclusion that many of the self-accusations that he makes in his *Prayers and Meditations* of dilatoriness and laziness were due to this reason.

Dr. Samuel Johnson was one of two sons, his brother Nathaniel dying when twenty-five years old. Boswell ascribes Samuel's constitutional weakness to the fact that he was the son of a man of fifty-six by a wife of forty years of age, rather than to any hereditary reason, for his father, Michael Johnson, was a man of large and robust frame.

Little Samuel was in early life attacked with scrofula, and was one of the last persons in this country to be touched by royal hands for the King's Evil. This remarkable ceremonial, for which a special service existed in the Book of Common Prayer till 1719, had been in vogue since the time of Edward

*The Presidential Address, delivered on October 12th, 1910, at the opening of the Thirty-seventh Session of the Bristol Medico-Chirurgical Society. From the Bristol Medico-Chirurgical Journal, Dec., 1910.

the Confessor, and we marvel in the present day at the persistence of what one monarch of this realm called "a silly superstition."† Johnson was touched by Queen Anne, whom he faintly remembered as a "lady in diamonds and a long black hood," and was presented with the token or coin which I understand is still preserved in the British Museum. This ceremony probably took place in Lent, 1712, as an advertisement is to be found in the *London Gazette* of that date to say that the Queen was ready to touch for the Evil. Johnson was then twenty months old, and was touched on the advice of Sir John Floyer, a physician of Litchfield.

What was the state of the cervical glands at the time of the touching is not recorded, but Johnson bore the scars in his neck all his life. Boswell ascribes Johnson's defective sight to the scrofula, and I think on this ground alone we may assume that Boswell was not a pathologist. It is extremely difficult to say from what defect of the eyes Johnson suffered. In one the sight was very deficient, or as he jocosely remarked, "This dog was never good for much," but one or both appear to have improved as he got older, suggesting that he had myopia, which improved as he became presbyopic, for he says in 1756 that his sight was restored to him. As an instance of how defective it was I may mention one incident. He had promised Mrs. Abingdon to be present at her benefit at Drury Lane Theatre, and he accordingly went and sat in "the front boxes with a body of wits." From this position he could neither hear nor see anything of the play, but he with due courtesy to the great actress sat the piece out—a play of five acts and a farce of two—"wrapped in the gravest abstraction."

For the eye trouble the treatment then employed was of a more active nature than for scrofula, for an issue was cut in his neck, that is an artificial ulcer was made and kept open by the insertion of some irritating substance. To go no farther back than Mr. Augustin Prichard, it is interesting to find an issue claimed as a successful remedy. He states in his reminiscences that his father, the distinguished ethnologist, originated the

†We marvel also at Christian Science, Dowieism, new thought, mind cures osteopathy's pretensions, etc., as our forebears did at Mesmerism, Perkinism and other delusions.

plan of making a long incision in the scalp for brain diseases, commenting that though a strong remedy, it was sometimes undoubtedly the means of saving life. Even in my student days it was mentioned in the lectures on *Materia Medica*.

Of his infant and adolescent ailments—common to all flesh—no mention is made. We have only a description of his appearance, which both as a young man and an old one was, to use a moderate expression, peculiar. As a young man at the age of twenty-five, we have an account from the hand of Miss Lucy Porter—the daughter of Johnson's wife by a previous husband—describing him when paying his addresses to his future wife, then double his age, "He was lean and lank, so that the immense structure of his bones was hideously striking to the eye, and the scars of his scrofula were deeply visible, . . . and he often had, seemingly, convulsive starts and odd gesticulations which tended to one's surprise and ridicule." We must be glad that Mrs. Porter overlooked these physical defects in the qualities of the man, for she said, "This is the most sensible man I ever saw in my life."

Boswell, as usual, had his theories about these convulsive starts, and compares them to St. Vitus's dance, and this statement has lead an American physician to assume that Johnson really had this complaint, and traces his subsequent heart troubles to this disease. Johnson had a much simpler explanation, for when asked by the *enfant terrible* of the day why he made such gestures, he replied, "From bad habit, my dear; do you take care to avoid bad habits."

Of his appearance in later life we may draw a general idea from the numerous portraits that are in existence, though no doubt the artist would gracefully and tactfully omit to make a striking feature of anything that would offend. Unfortunately, Johnson was not particular in his personal appearance, or indeed in the niceties of polite behaviour. There is no need to recall them, they do not come within the scope of my address, but one cannot help reminding you of a witty saying of Mrs. Boswell's, who, when no doubt a little out of temper with Johnson's uncouth manners, chided her husband with his servility to the great men, "I have heard of a man leading a bear, but never of a bear leading a man." Johnson's enemies, and for the

matter of that his friends, did not mind making coarse remarks about his peculiarities. "The Caliban of Literature," and "The Puffy Pensioner," are not polite, although clever and to the point.

Johnson's chief trouble during his life was a tendency to melancholia and depression of spirits. He claimed that it was hereditary, for his father suffered from it. There are frequent references all through the life of Johnson to this "constitutional melancholia," which he himself termed vile, and which he says made him "mad in life, at least not sober." It caused him when the fit was upon him to shut himself up and avoid the society of his friends. It is related how on one occasion he was found "in a deplorable state, sighing, groaning, and talking to himself, and restlessly walking from room to room." He does not appear to have been averse to talking about it with Boswell, whom he found a sympathetic listener and fellow-sufferer, though the difference between the two men is illustrated by the fact that Johnson's complaints were written in his *Prayers and Meditations*, intended for his own reflection, while Boswell makes his confessions in letters to Johnson, and publishes them unblushingly in the *Life of Johnson*.

Johnson's anxiety about these fits of depression was that he might be deprived of his reason, a not unnatural fear to a man of great mental capacity, whose livelihood, as well as the care of several distressed females and an eccentric doctor, depended on his retention of his faculties. Yet with this constant depression of spirits and general feeling of ill-health, he had the greatest contempt for anyone who paraded his feelings, wrote about them in correspondence, or introduced the subject of his health as an excuse for omitting to write and supply some information asked of him. He could console, but on one occasion his patience was too severely tried by Boswell, and he gave him what may be called a piece of his mind in an unmistakable manner. "You are always complaining of melancholia, and I conclude from these complaints that you are fond of it. No man talks of that which he desires to conceal, and every man desires to conceal that of which he is ashamed. Do not attempt to deny it, *manifestum habemus furem*, make it an invariable and obligatory law to yourself never to mention

your own diseases—if you are never to speak of them, you will think on them but little, and if you think on them but little they will molest you rarely. When you talk of them, it is plain that you either want pity or praise; for praise there is no room—and pity will do you no good. Therefore, from this hour speak no more, think no more, about them.” It is significant that Boswell, though candid enough to insert this letter (a gem in its way), makes no comment upon it.

Boswell did not repeat all Johnson’s complaints, for Mrs. Thrale says that he was constantly doing so to her; this was after the great quarrel between them, and Mrs. Thrale may have said it in spite.

I am not aware that we at the present time claim melancholia as a peculiarity of this island, but Dr. Cheyne, whom Boswell describes as “learned, philosophic and pious,” wrote a book on this condition, and called it *The English Malady*. Johnson recommended Boswell to study the book, as he would find some useful advice in it.

With all his bad health, Johnson had the greatest contempt for what he calls valetudinarianism, a word that I cannot help thinking has changed its meaning since Johnson’s day. According to the dictionaries of the present day it is defined as a state of ill-health, but this will not accord with Johnson’s own example, which would be better explained by the modern word neurasthenia. To his friend Hector he says, “Don’t grow like Congreve, nor let me grow like him when you are near me,” for this same Congreve, an old school-fellow of Johnson’s, had grown afraid “to go into any house but his own,” and was encouraged to drink by an elderly female he called his cousin, “in which he is very willing to be encouraged,” making him always “muddy.” And in another place he says, “There is nothing against which an old man should be so much on his guard as putting himself out to nurse. I do not know a more disagreeable character than a valetudinarian, who thinks he may do anything that is for his ease, and indulges himself in the grossest freedom. Sir, he brings himself to the state of a hog in a sty.”

Boswell tells us that when he left Johnson in May, 1783, it was with a “fearful apprehension of what might happen before

his return, as his health was in a more precarious state than at any time when I had parted with him." I do not think that Boswell made any claim to the reputed powers of second sight that the inhabitants north of the Tweed are often credited to possess, but his fearful apprehensions were fulfilled in a remarkable way. Eighteen days later Johnson had a stroke, and it is of so interesting a character that I will give you rather a full account of the course of the disease. From Johnson's own account we learn that he went to bed as usual after a not very fatiguing day, having only sat for his portrait, which was being painted by Miss Reynolds. After a short sleep he awoke and sat up, when he felt a confusion and indistinctness in his head, which lasted, he supposed, about half a minute. "I was alarmed, and prayed God that however He might afflict my body He would spare my understanding. That prayer, that I might try the integrity of my faculties, I made in Latin verse. The lines were not good, but I knew them not to be very good, but I made them easily, and concluded myself to be unimpaired in faculties." How many of us could compose a prayer in Latin verse under such circumstances—or any other?

"Soon after I perceived that I had suffered a paralytic stroke, and that my speech was taken from me. I had no pain and so little dejection in this dreadful state that I wondered at my own apathy, and considered that perhaps death itself, when it should come, would excite less horror than now seemed to attend it. In order to rouse the vocal organs I took two drams of wine. Wine has been celebrated for the production of eloquence. I put myself in violent motion and I think repeated it [probably the wine], but all was in vain. I went to bed and, strange as it may seem, I think slept." On awakening he found that his power of writing was not lost, so wrote instructions to his servant Francis and a friend, though he found some difficulty. "My hand, I know not how or why, made wrong letters." How rapid was his recovery will be seen when I tell you that the account I have just read to you was written by him only two days after the stroke, and further he says that he was able to repeat the Lord's Prayer, "with no very imperfect articulation."

The clearness of this account and the presence of mind under

the circumstances are remarkable, no less remarkable too are Johnson's methods of treatment. Two drams of wine to produce eloquence when the speech centre is affected amuses us in the twentieth century, but it will illustrate better than any words of mine the state of darkness in which medical science was in the Georgian Era. In another letter written on the day of his stroke he suggests that by a "speedy application of stimulants much might be done. I question if a vomit, vigorous and rough, would not rouse the organs of speech to action." As a help to the Doctor whom he called in—Dr. Heberden—he says he has been bled frequently for an asthmatic complaint, but had forborne for some time by Dr. Pepys's persuasion, who had perceived that his legs had begun to swell. We are not told any more details of the illness. Boswell was not in London at the time; had he been we should probably have had much more information.

Johnson made a complete recovery in a very few days, for on July 3rd—that is only seventeen days from the date of his stroke—he writes that "Nature had renewed its operations," and that he could carry on a conversation, though only for a short time, as his nerves were weak. His physicians pronounced him cured, but I fancy he must have taken matters a good deal in his own hand, for he had been for a drive to Hampstead, no small thing in a Georgian carriage, and had even dined at the club.

He now kept well for a considerable time except for attacks of gout, till he was threatened with a surgical operation. The complaint from which he suffered was a sarcocele, a solid swelling as distinguished from a hydrocele, a fluid one.

The surgeons who were called in to pronounce upon the nature of the disease were Percival Pott and Cruikshank, the latter of whom he had previously recommended as a lecturer to the Royal Academy in place of William Hunter. We are not told much, though Boswell says that he has several letters filled with "unpleasing technical details." Whatever was the nature of the disease matters little, for Johnson was spared the ordeal of an operation by the trouble getting well spontaneously. He showed great fortitude in preparing himself for what must have

been in those days a grave risk to life, apart from the pain of an operation in the pre-anæsthetic time.

Though Johnson's health was far from satisfactory, he continued to make visits to his friends, and even projected a trip to Italy, but his letters show that he suffered a great deal from his "asthmatic affection and from gout." In May he suddenly obtained extraordinary relief. He had shut himself up and employed the day in the particular exercise of religion—fasting, humiliation and prayer—and his deeply religious belief made him ascribe the sudden amelioration of his symptoms as a divine answer to his prayers.

As Boswell, who had been in London on one of his visits, was returning to Edinburgh, Johnson asked him to lay the details of his case before the best physicians of that city, who at that time, as now, stood high in repute in the medical world. What he hoped to gain from them and their opinion is difficult to say, for they could only form a diagnosis or suggest treatment on the evidence of a non-medical man. But true to his promise, Boswell duly laid Johnson's case before Drs. Cullen, Hope, Munroe, Gillespie, and Sir Alexander Dick. What their opinions were is not recorded, but Johnson was profoundly obliged to them, possibly because they wrote such flattering encomiums on his greatness. Like most of us—like the least of us—Johnson was susceptible to flattery, even if a little fulsome. Of remedies suggested only one is preserved for us, that of Sir Alexander Dick, who appears to have recommended some rhubarb, cultivated in his own garden in Prestonfields; this Boswell was to bring when he returned to London.

In the year 1783, when Boswell was in London, in March, it was evident that Johnson was, to use a common expression, breaking up, though his ardour for literature was not abated, and he worked as hard as ever in his more or less dilatory manner. Boswell notes his pallor, shortness of breath and bad nights, and mentions as an instance of how difficult a patient he was that Sir Lucas Pepys, the Thrales' doctor, said, "If you were tractable, sir, I should prescribe for you." Johnson was then taking opium for producing sleep. I believe that this was then the only hypnotic drug known, as chloral and bromides had not been discovered. No doubt Johnson felt his own

intractableness, for he said, "How few of one's friends' houses would a man choose to be at when he is sick." And Boswell says that he only mentioned one, the Thrales.'

The poor old man's last days appear to have been very heavy ones for him, for a second attack of gout came upon him "with a violence I never experienced before." The opinion of Dr. Mudge may have relieved his mind somewhat, for he represented the attack of gout as antagonistic to the palsy.

Added to all the troubles of bad health, he had the misfortune to lose, one after another, the members of his strange household. Levet's death, followed by that of Mrs. Williams, left him very solitary. He says, "Sickness and solitude press me very heavily. I could bear sickness better if I were relieved from solitude." You all recollect Johnson's definition of a certain man—he was clubbable, and to no one could that adjective be better applied than to Johnson himself. He loved the society of his fellow-man, and though through his last illness his friends were constant in their visits to him, he felt the loneliness of his own home and the absence of his house companions.

At the end of the year 1783 he was seized with a spasmodic asthma of such violence that he was confined to the house in great distress, sometimes being obliged to sit up all night. Dropsy began to develop, and reached up to his thighs, but was relieved later by a natural evacuation. In April he writes that his "recovery is such that neither myself nor the physicians at all expect," but for all that he was able to get out to the club, and even later in the year to pay a visit to his beloved Oxford, "the magnificent and venerable seat of learning, orthodoxy and Toryism," as Boswell called my native city, an appreciation that might be passed even now except, perhaps, as regards orthodoxy.

We medical men sometimes, and perhaps with justice, complain that our efforts on behalf of our patients meet with scant recognition, or only with thanks of an ephemeral character. I am glad to say that, trying patient as he must have been, Johnson expressed his gratitude in no measured terms for the assiduous attention of his medical attendants. "If the virtue of medicine could be enforced by the benevolence of the pre-

scriber, how soon should I be well," he wrote to his medical man, Dr. Brocklesby.

And so matters went on, asthma, dropsy, and sleeplessness followed him wherever he went, and on his return to London in November it was evident that he could not live long. So greatly had the dropsy increased that incisions had to be made, incisions that Johnson did not think deep enough, and so deepened for himself, thereby rendering himself open to the charge of attempting to hasten his own end. All was of no avail, and having asked his friend Brocklesby to give him a direct answer whether he could recover, and being told he could not without a miracle, he said, "Then I will take no more physic, not even opiates, for I have prayed that I may render up my soul to God unclouded." A few days later he died, passing away so peacefully that his attendants hardly noticed when dissolution took place. Had he lived in these days no doubt he would have had the administrations of a skilled attendant to ease his last hours. He, poor man, had to put up with one that he said was "an idiot, he is as awkward as a turnspit when first put into a wheel, and as sleepy as a dormouse." I am glad to say the sleepy one was dismissed, and a more wakeful one found, to whom Johnson gave his grateful thanks.

It is by no means an easy matter at the present time to form an opinion as to what was the complaint from which Johnson suffered, and which ultimately caused his death. We read of his asthma, the swelling of his legs and breathlessness, but we must not judge too hastily of the terms that were used in those days. They did not recognize the differences between renal, cardiac or bronchial asthma; and the word gout was used in a very loose manner, much the same as many of our own patients make use of it now; and the swelling of his legs may have been due to heart or renal troubles. We must remember too that Boswell was not a medical man, but an advocate, and though he was a well-read man, probably knew little of medicine; indeed, the remarks that he often makes show that he was not more skilled in it or more versed in the diagnosis of disease than the common herd. We must also recall the fact that diagnosis by auscultation was unknown till many years after Johnson's death, and the few drugs that we read of Johnson

taking give us no clue as to the diagnosis of the physicians who were attending him.

On this subject two medical men of the United States have given their views. Dr. Cahill believes that Johnson had mitral regurgitation following several rheumatic attacks, more particularly after the one in 1763. I have read through the record of this year with a view of reconciling this suggestion, but am quite unable to accept his theory. This was the year that Boswell made Johnson's acquaintance, and began to collect the notes with the intention of writing the biography, and I cannot believe that he would at the very beginning of his friendship with his great patron have made no reference to an attack of rheumatic fever. I can find no reference that can in any way be made to read that Johnson had such a disease. Dr. Cahill says that Johnson early developed chorea (though he qualifies it by saying that it was habit chorea, a disease that I never have heard produced cardiac disease), and then on this very slender foundation says that the whole of the subsequent medical history may be followed: "The succession of chorea, rheumatism, cardiac dropsy form a clear picture with which all physicians are unhappily too familiar."

The second writer says that he had angina. I cannot agree with this either. It is true that he was attended by the doctor who first described that disease, Dr. Heberden, but I think there is not sufficient evidence for this assumption, although angina was then called *asthma Heberdenii*.

My opinion is that Johnson suffered from asthma as he grew older, and that led to dilatation of the heart with dropsy, and that he died from heart failure. It is quite possible, too, that there was a good deal of fatty infiltration of the heart muscle, as we knew Johnson became very fat in his later years.*

* * * * *

I now come to the second part of my paper, and hope that you will bear with me while I give a short account of some of Johnson's opinions on medical matters, and say a few words

*Since reading the above my attention has been called by my friend, Dr. H. Rolleston, to an account of an autopsy on the body of Johnson. I hope to add a condensed statement of what was found to the end of this address. Meanwhile I will only say that my opinion here stated must be modified.

about the position of medical men and medical treatment as shown in the *Life of Johnson*.

Johnson, as you probably know, was a man who had little sympathy with the fads, and I regret to say sometimes with the opinions of others, and when he disagreed he spoke his mind in terms that could not be mistaken. He for instance was not a believer in the influence of the weather on the health, and he was wont in his rather forcible manner to ride rough-shod over those who expressed opinions differing from his own. "He had," says Boswell, "a contempt for the notion that the weather affects the human frame," though in the last year of his life, when writing to Dr. Burney in August, he says, "The weather you know has not been balmy. I am now reduced to think, and am at last content to talk of the weather. Pride must have a fall." The condition of the weather was to him such a self-evident fact that he said, "You are telling us that of which none but men in a mine or a dungeon can be ignorant. Let us bear with patience and enjoy in quiet such elementary changes, whether for the better or worse, as they are never secrets." On one occasion he and Boswell were leaving the "Mitre," where they had been dining, and found it to be raining, and the latter made some commonplace remark on the relaxing effect of rain on the nerves and the depression of spirits that it caused, but admitted it was good for vegetables. "Why yes, sir, it is good for vegetables, and good for the animals who eat those vegetables, and good for the animals who eat those animals."

I presume that I may regard the taking of or abstention from alcoholic fluids as a medical question, for it is one that was fought almost as strongly in Johnson's day as now. It was a drinking age, I might say almost a drunken one. Johnson tells us that even in his day persons were drinking less than their ancestors did, for he remembered when all the decent people of Lichfield got drunk every night, and were none the worse thought of. The drink then (in the days of his ancestors) was chiefly beer, which was cheap, for when wine became commoner the drinkers were not in such "haste," which according to Johnson was the cause of this change in manners. As a young man Johnson took his wine, and could do his bottle, his favorite one being port sweetened with sugar, and he celebrated his

acquaintance with Boswell by performing this feat, though he tells us that if he took too much he went home quietly. As a middle-aged man Johnson became an abstainer. He did so from no dislike of wine or because he thought it was wrong to take it, but simply because he was advised to do so by one of his doctors, but by whom or when the advice was given is not recorded.

Johnson once told Boswell that he, when on a visit to University College, Oxford, drank three bottles of port at a sitting, and was none the worse for it. The giving up of wine to him was a diminution of pleasure but not of happiness, as there was more pleasure in being rational than drunk. Boswell was none too sparing in his potations, and the doctor was very firm in his advice to him: "I must entreat you to be scrupulous in the use of strong liquors. One night's drunkenness may defeat the labors of forty days well employed." Boswell reminded him how they used to have headaches after the wine they took, but Johnson replied, "No, sir, it was not the wine that made your head ache, but the sense I put into it." Boswell, "What, will sense make a head ache?" Johnson, "Yes, sir, when it is not used to it."

As an instance of what men could drink in those days I may instance the case of a Dr. Campbell, I believe a divine, who stated that he drank thirteen bottles of port at one sitting. Boswell vouched for Campbell's statement, qualifying it with the remark that the sitting was a long one. When discussing this vinous feat Johnson upheld Campbell as a veracious man with pen and ink, "but you could not entirely depend on anything that he told you in conversation, or if there is a fact mixed with it. However, I love Campbell, he was a solid orthodox man, he had a reverence for religion, and though defective in practice, he was religious in principle." Please mark the fine distinction.

The wine consumed in those days was chiefly port, which cost only 5s. 6d. a gallon. Of claret, though not a newly imported wine, Johnson had a very poor opinion, saying a man must be drowned in it before it made him drunk, so that it seems as if the potency of the wine was the measure of its quality rather than the flavor of its bouquet. Everyone knows the famous Johnsonian saying after being induced to taste a

glass of claret, "Claret for boys, port for men, but he who aspires to be a hero must drink brandy." I may mention that Johnson would not let Boswell drink the king's health in whisky, but we must bear in mind his aversion to everything Scotch. Florence wine—I presume much the same as the Chianti of the present day—he thought poor stuff. "It is wine only to the eye; it is wine neither while you are drinking it, nor after you have drunk it, it neither pleases the taste nor exhilarates the spirits."

Johnson, who had learned a good deal of medicine from the assistance that he had given Dr. James in compiling his *Dictionary of Drugs*, had his own ideas on medical subjects. This assumption of knowledge on matters not connected with our own particular branch of human learning is a common failing, but perhaps it is not more universal or more firmly established than when connected with our own profession. It constitutes one of the chief difficulties with which all practitioners of medicine have to cope, and much as the art of medicine may advance, the omniscience of the public will keep pace with and even out-run the knowledge of those who make it their life's study. Numerous examples might be given of Johnson's opinion on medical matters, but I will only repeat one, as it bears out the well-known fact of the contagiousness of the common cold in the head. When planning with Boswell the tour to the Hebrides he praised the "magnanimity" of Macaulay in asserting the wonderful story of how, when a ship called at St. Kilda, all the inhabitants were seized with a cold, because it was a well-attested fact. Johnson's theory was that a north-east wind was essential before a stranger could land, owing to the difficulties of the exposed harbour. "The wind," he said, "not the stranger, occasions the epidemic cold." I may say that St. Kilda is not one of the Faroe Islands, as an American lately stated, but is one of the outlying islands of the Hebrides, and part of the United Kingdom. Johnson's theory of the evil effects of a particular wind is interesting, and probably the reverse of the truth.

On one occasion when a pretty large circle of friends had met Johnson gave his views on medicated baths, a system, if I may call it so, that had been made popular by a certain

Dominicetti. Johnson believed them to be of no more value than warm water, having no more effect than tepid moisture. Johnson was not in one of his polite moods that evening, and no one of the members combating this opinion, he said, "Well, sir, go to Dominicetti, and get yourself fumigated, but be sure that the steam be directed to thy head, for that is the peccant part." Cibber said of Johnson, "When his pistol misses fire, he knocks you down with the butt-end of it." A not unfit comment.

One is surprised to find that Johnson had his views on the management of hospitals. "Though many men are nominally entrusted with the administration of hospitals and public institutions, almost all the good is done by one man, by whom the rest are driven on, owing to confidence in him and indolence in them." I am afraid that the converse is also true.

When getting on in life he no doubt felt that there was a fear that people might say of him that his intellectual powers were failing. "There is a wicked inclination in most people to suppose an old man decays in his intellect. If a young or middle-aged man, when leaving a company, does not recollect where he laid his hat, it is nothing; but if some inattention is discovered in an old man, people will shrug up their shoulders and say his memory is going." This is, I fear, an apology for old age.

The belief that disease is the scourge of the Almighty to try our faith no doubt had its origin from the Old Testament and from the Book of Job, in which you will remember the conference between the Almighty and the Evil One on the power of the latter to make the unfortunate victim of disease and misfortune curse God and die. Johnson, a Tory with the orthodox opinions of the time, held views somewhat of this sort: "Acute diseases are the immediate and inevitable strokes of heaven, but of them the pain is short and the conclusion speedy. Chronical disorders, by which we are suspended in tedious tortures between life and death, are commonly the effect of our own misconduct and intemperance. To die is the fate of man, but to die with lingering anguish is generally his own folly."

Johnson was not unmindful of the need of care for the preservation of health. Cleanliness was not much in vogue in those days, and no one can accuse Johnson of the too lavish use of

water externally; but the following schedule is of interest, as showing that he had got hold of some sensible rules for health. They were given to Mr. Perkins, Thrale's manager:—

- “ (1) Turn all care out of your head as soon as you mount your chaise.
- (2) Do not think about frugality, your health is worth more than it cost.
- (3) Do not continue any day's journey to fatigue.
- (4) Take now and then a day's rest.
- (5) Get a smart sea-sickness if you can.
- (6) Cast away all anxiety, and keep your mind at ease.”

This last direction is the principal; with an unquiet mind neither “exercise nor diet nor physic can be of much use.”

It will, I think, not be devoid of interest if we for a few minutes take the measure of the medical profession in the days when Johnson lived and George III was king, and it must be confessed that, though individual medical men were held in high repute, made large incomes, and had honors conferred upon them as now, the state of medical knowledge was in those days deplorably low. None of the great discoveries had been made that at the present time assist us in diagnosing our patient's ailments. The reason for this is not far to seek. Physical science was unknown, undiscovered. It was not till the commencement of the nineteenth century that the foundations of chemistry were laid, or the correct interpretation of the laws of physical science were understood. Anatomy, it is true, had reached a high degree of perfection, but beyond the discovery by Harvey one hundred years before, the physiology of the body was unknown, the functions of the organs misinterpreted, and the causes of disease an unknown quantity. Therapeutics had hardly emerged from the darkness of the days of hideous and disgusting medicaments, and the few reliable drugs were difficult and expensive to obtain. Added to this, the education of a medical man was of the most meagre description. There was no Medical Act to regulate or control the profession, no supervision of examinations of licensing bodies, while the exclusiveness of the Royal College of Physicians had a most harmful effect on the practice of medicine.

Any reference to this period of history would be incomplete without some few words on the theories of medicine that obtained both in this country and on the continent. The remarks must be very short, for it is impossible to go deeply into them owing to their complexity and obscureness. At the beginning of the century the theories of Boerhaave were almost universally accepted and known as the Eclectic System, though they were founded mostly on still older ones, even on Galen's. Health, disease, and debility depended on "tense, relaxed or weak fibre." He adopted the word "putridity" from the pneumatics and the Hippocratic "enormon" as the cause of "motion," an unknown something, which occasions the senses and "motions." Hoffman introduced the Mechanico-Dynamic System, and was followed by Cullen. In his system the nerves played the most important part, nerve force and activity being the terms, and used without any definition. Fever was due to diminished energy of the brain, and was a reparatory effort of Nature. Gout was due to atony of the stomach, and scrofula to acidity, and putrid fever to the humors. In fact, the extraordinary jumble of words without meaning reads very like Christian Science of the present day.

The School of Montpellier was inaugurated by de Bordeau, the originator of the saying, "The tripod of life." In this system the heart, brain and stomach regulated all the other organs, disease being due to acidity of the glands. This was followed by Reil's doctrine of vital force, each organ having its own liability to changes due to season, age, and even the time of day; and to call forth this vital force certain imponderables were required, such as heat, light, electricity. From this Mesmer developed his theory of animal magnetism, and the later romancers the phlogistic and antiphlogistic theories. Lastly, Brown started the theory known as the Brunonian, in which all vital phenomena were due to irritation. Brown's therapeutics are said to have killed more men than the French and the Napoleonic wars put together.

If we are at the present time troubled with quacks, herbalists, bone-setters, prescribing chemists and irregular practitioners of medicine, the condition of affairs in the Georgian days was far worse. Besides numbers of charlatans of all descrip-

tions, three sets of persons carried on practice, uncontrolled, in opposition to the legitimate practitioners of medicine. Firstly, the apothecary. He was little removed from the quack. He was, it is true, in possession of some sort of license to practice, but his standard of ethics was low and the knowledge of his craft small. At times he was a great asset to the medical man, for he would call him in consultation on treatment. In this way he would be in a position of giving patronage, and so was a person not to be slighted, but rather to be made much of. The herbalists were quite irregular practitioners, they had no qualifications of any sort, and a perusal of their pharmacopœia shows how colossal was their ignorance and immense their impudence. The quack, "a person making a pretense of medical knowledge," was a flourishing person. He was not ashamed to stoop to any artifice that would bring grist to his mill, and entice the public only one degree more ignorant than he, to entrust their bodily ailments to him. The modern quack, and the disbarred practitioner of to-day, is a poor descendant of the Georgian one, they have neither the impudence that can cloak ignorance nor the powers of self-laudation that carry conviction.

We must not form our conceptions of the position of medical men on the success of any well-known man of those days, on the fortunes of Radcliffe or Mead. The bulk of the profession in those days was far worse off from a monetary point of view than we are at present; and if the social status of medical men to-day is superior to what it was one hundred and fifty years ago, it is due to our superior education and greater skill, and to our having been able to convince the public by the application of our knowledge that our opinion is worth having and worthy of being acted upon.

To become a successful doctor in Johnson's day a definite course had to be followed. The aspirant to medical distinction had to decide to which political party he would ally himself, and to assiduously toady to the leaders and wire-pullers. Politics ran even higher in those days than they do in the present, and anyone wishing to advance in medicine had better not adopt the Whig programme. Johnson himself was a Tory of the deepest hue, and could see no good, nor would hear it, of his political opponents. Having decided on the party you wish to be at-

tached to, you must frequent the coffee-house favored by that side you have selected, be seen there daily, and "learn and practice every obsequious and crawling art which dishonors a man, and so by slow degrees to attract and secure patrons." I do not think that I am over-stating the picture, degrading as it is to our profession, for the last sentence is quoted from an author who knew London and its people as few other have, and his illustration may be relied on as truthful.

Of the practice of surgery in the Georgian Era I need say little. The revolution in that branch of our art is so recent that it will suffice to say that surgery, as practised then, was little in advance of what obtained in the days of the Roman Empire. Medicine was not in a much better position. The antiquated pharmacopœia was being thrust aside by more modern and rational drugs, and if some of the methods employed appear to us to be crude, if not barbarous, it may be said that they were the attempts, heroic at times, to discover how disease might be treated in a more rational manner. One of the first steps taken was the introduction of the practice of inoculation for small-pox, then one of the commonest and most fatal of diseases. Issues, setons, cupping and bleeding were all in full use: only the last two remain with us in an emaciated condition. Johnson, though a great dabbler in physic, was not an advocate of periodic bleeding as was then so much in fashion. His opinion was that by frequent bleedings you accustom yourself to an evacuation that Nature cannot perform for herself, and therefore cannot help you, should you, from forgetfulness or any other cause, omit it: so you may suddenly suffocate. For other periodic evacuations Nature can supply the omission. Dr. Taylor, with whom this conversation was held, said that he did not like to take an emetic for fear of breaking some small vessels. "Oh," said Johnson, blowing with high derision, "if you have so many things to break you had better break your neck and there's an end on't. You will break no small vessels."

An insight into the drugs that were used in those days is given me by a copy of the Pharmacopœia of St. Thomas's Hospital for 1772. This little book was used by my great-great-grandfather, one of George III's physicians, and in it are numerous pages of notes on diseases, and the remedies employed,

in his handwriting. I cannot go at length into the measures he took to cure his patients, but the list of drugs shows how few are still in use, or perhaps I should say how greatly we have increased our list.

The number of drugs mentioned in Boswell's *Life* is very small: opium, squills, Peruvian bark, and tartar emetic constitute the total. Johnson took all of these, and in his last illness "Dr. James's compound medicines," whose ingredients appeared to him "to be inefficacious and trifling, and sometimes heterogeneous and destructive to each other." Dr. James * * * has still one powder known by his name, "Pulvis Antimonialis," which is so simple as hardly to come under Johnson's condemnation. It was the day of huge mixtures, of which the celebrated Mithradate, having opium as its most important ingredient, was the best known, it having seventy-three different drugs to compose its formula. The compound medicines of James that Johnson took exception to contained a very large number and totalled three hundred and thirty grains, of which four were of tartar emetic. It also contained thebaic tincture, a preparation of opium. Johnson said of it, "He that writes thus surely writes for show. * * * We will, if you please, leave this medicine alone. The squills have every suffrage, and in the squills we will rest for the present." Rhubarb was then a rare drug and highly prized, so that Sir Alexander Dick's present to Johnson was a very marked attention. It came originally from China by the caravan route to Russia once a year. The Russian Government had a monopoly till 1762, when the trade was thrown open, but the Russian Rhubarb Office was only abolished in 1863. In my father's work on the *History of Prices* I find that half an ounce cost 5s. in 1741.

[Note by the Editor of the *Alienist and Neurologist*: Had Johnson lived here in our day or in Van Deusen and Beard's time, his malady would have been termed by them or some of us, neurasthenia or melancholic neurasthenia or psychasthenic melancholia.]

NOTES ON THE HISTORY OF PSYCHIATRY.—III.*

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(Continued from Page 155, February, 1911.)

IN the February number of the *Alienist and Neurologist* for this year, I presented a continuation of the translation of Friedreich's "Versuch einer Literärgeschichte der Pathologie und Therapie der psychischen Krankheiten," and also included some notes by Fleming on the "Psychiatry of Celsus."

In carrying out my plan to place before English reading students some of the originals from other sources, I shall here continue the translation of Friedreich, taking up the work more particularly of Aretaeus. I then purpose presenting a translation *in toto* of the chapter on Melancholia and Madness from Aretaeus, and I shall also begin the translation of a paper by Falk on "Early Greek and Roman Psychiatry," which is without doubt one of the most important bits of work dealing with this theme. There has been little attention given to Falk's monograph by English speaking students of the subject.

The work of Aretaeus is particularly interesting, since in recent years it has been stated that he was the originator of the idea of a circular psychosis, and of its more modern descendant, the manic-depressive psychoses; thus antedating both Falret and Kraepelin.

In the first of these contributions it was shown that the words "mania" and "melancholia" had little of the significance now given to them. They meant hardly more than paranoia, then synonymous with all insanity. They were more often considered stages of the same thing, in the sense of little, more,

*Preceding numbers February, 1910; February, 1911.

most; thus hypochondria, mania, melancholia, in which the two latter might be interchangeable. Phrenitis was almost the only type set apart from the others by sharp and fast lines, *i. e.*, the presence of fever, and even this is matched up with modern conceptions with the greatest of difficulty. In the works of Aretaeus the book on phrenitis is lost. In Nasse's list, we find the different designations applied in Hippocrates' times, but it was not until Cicero made his attempt at a definition of the various terms used in psychology that any uniformity in synonymy was reached, and that uniformity is not all that could be desired. We are not much better off at the present time, for the mania of Kraepelin, of most English psychiatrists, of many French psychiatrists may mean the same, or absolutely different. Thus Kraepelin restricts mania to the manic phase of his manic depressive psychosis. When Bruce speaks of the positive finding of complement deviation by the Wassermann method in mania, to most English psychiatrists it may mean any pathological excitement, other psychiatrists will talk of a maniacal period in a syphilitic psychosis. Similar verbal perplexities, even more pronounced, have contributed to the difficulties in interpretation of what the ancients meant by their terms, and our present day attempts in matching them to modern speech symbols must indeed be very guarded. This by way of a preamble to the inquiry what Aretaeus meant by his mania-melancholia, which has been rather lightly interpreted as an ancient symbol of the modern synthesis, manic-depressive.

In the work of Caelius Aurelianus one finds an active discussion as to whether hypochondriasis is to be regarded as a distinct psychosis; whether it is a part of a melancholia, or whether, in other places, it should be regarded as a mania—both melancholia and mania here being stages of the same thing, *i. e.*, "insanity." Aretaeus continues the discussion, and all that we can say is that Aretaeus really discusses the relationship of a hypochondriasis to a melancholia or a mania; whether hypochondriasis passes over into an insanity or not, or forms the early stages. This is about all that I can make out of the notion that Aretaeus had an inkling of a circular psychosis—of a manic-depressive insanity—when one care-

fully refrains from putting modern symbols into the phrases of the ancients.

As I have taken occasion to mention this subject in another place,† I shall let the matter rest until a complete discussion can be made.

ARETAEUS OF CAPPADOCIA.*

Aretaeus of Cappadocia¹ in his essay *De Causis et Signis Diuturne Morb.*² gave a description of melancholia and mania.

I. Melancholia he defines as a sadness of the mind in which the patient broods over a certain subject³; it is without fever. It appears when the black bile ascends towards the stomach and diaphragm.⁴ Therefore since the word bile (Galle) (χολη) means⁵ anger, and black bile passionate anger, we can also call the maniacs and those who rage, etc., melancholics.⁶

Melancholia is commonly the beginning of mania.⁷ They differ, however, in that the character of the disturbance, the wildness, is always the same in mania, but in melancholia we have at times a fear of poisoning, at times misanthropy, then again religious superstition, inclination to suicide and the like as characteristics.

If the bile is retained in the precordial and diaphragmatic regions, it can be easier got rid of. But if the head is attracted at the same time, it is common to have violent anger and fury. (Tobsucht.)⁸

†Cyclothemia. Am. Jl. Insanity, April, 1911.

*Continuation of Freidreich's, Versuch einer Literärgeschichte.

¹The dates of his life are uncertain (Kuhn epist. de dubia Aretaei aetate, Lips. 1779 and further in Kuhn's opus aead. Lips. 1827, Vol. 1, p. 13-46.) He most likely lived during Nero's time; 80 A. D. according to other less reliable suppositions, during the time of Titus or Domitianus. The time of his life is therefore hard to determine, because he mentioned no writers but Hippocrates, and because he is quoted by few authors only.

²Lib. 1 Cap V and VI (Vindob. 1790, p. 110-125.)

³"Animi moeror, propter certam quandam opinionem," p. 112.

⁴Page 110.

⁵As for example in Ilias I, 101. Atreus, the heroic son of Agamemnon, prince of the people cried out again, angered with pain, his darkened heart swelled with bile, as the black stream flowed about, and his eyes sparkled and streamed with passion.

⁶Page 111.

⁷Page 112.

⁸Page 113.

The disease is more common amongst males than females, but among the latter it is more violent. It is peculiar to the middle aged, occurs especially in summer and fall, usually disappears in the spring.

The symptoms of the development of melancholia by Aretaeus are given in detail and quite true. These are his own words.⁹

The following are some of the more evident marks of the affection; the patients are quiet or sad, dejected and dull without any reason; melancholy, too, begins when it is impossible to assign a cause, besides, they are passionate, ill-natured, wakeful, and raised out of their sleep in great confusion; great terror likewise seizes them if the disease increases, at which times their dreams are frightful, clear and wearing an appearance of truth, whatever they pursue with ardour is easily repented of; they are changeable, shameless, anxious about trifles, covetous and soon after they are simple, profuse, lavishing what is in their possession, which proceeds not from any virtue of mind, but the variety and change of the disease. But if it still comes to a greater height, they hate and shun society, complain of things the most trivial, curse life and covet death, the mind likewise of many border upon a state of total insensibility and infatuation, in so much that they are ignorant of everything, forgetful of themselves, and lead the life of beasts. Their habit of body is changed to the worse, their color is of a blackish green mixture, when the bile, instead of passing downwards is diffused over the whole body, mingled with the mass of blood; they are thin and meagre, notwithstanding their voracious appetite, for sleep contributes nothing to their meat and drink in strengthening them, their wakeful disposition carries everything outward and dissipates it insensibly, their belly therefore scarcely passes anything downwards, but whatever is dejected is round and dry, swimming in a black bilious mixture, their urine is in small quantity, acrid and tinged with bile, they are troubled with flatulency in the precordia, foetid, strong heavy smelling eructations, as if they were exhaled from stagnating salt water, at times

⁹Page 113-115. Given here in translation Moffatt.

some sharp liquid substance with a mixture of bile passes upwards. Their pulse for the most part is small, dull, weak, frequent and has a sensation of cold.

II. Mania, (or insanity)¹⁰ is a continuous disorder of the mind (*diuturna ex toto mentis alienatio*) without fever. If fever accompanies the disturbance it does not in reality belong to this disease but is the outgrowth of some accidental cause.

Neither is delirium (Wuth) arising from the taking of specific substances, as wine, hyoscyamus and the like, deserving the designation of mania, for such disturbances occur quickly and disappear just as quickly.

Neither should that insanity peculiar to old age be classed here, for this disturbance is due to feebleness, that of mania is due to excitement.¹¹ Insanity of old age has no intervals of quiescence, and is incurable, whereas mania has intermittent periods and is curable.

Those who are naturally passionate, light-minded or frivolous, also those of the opposite character are among those inclined to mania. Time of puberty and youth is most favorable for the appearance of this disease.¹²

The form and ways which mania manifests are manifold.¹³ Some are cheerful and like to play, etc., others passionate and of destructive type, who seek to kill others as well as themselves. The seat of the disease is in the head and precordial region.¹⁴ Both regions may be affected at once, or, it may first be one, then the other interchangeably.

With regard to the course of the disease, Aretaeus distinguishes it in its development, a rise and a decline.¹⁵

As the disease begins to develop one notices passion, cheerfulness or depression, without cause, there is sleeplessness, headache, ringing in the ears, paralyses, gluttony or loss of appetite, the eyes are sunken and the patient sees various pictures pass before the eyes and the like. At the

¹⁰Pap. VI. page 116.

¹¹Page 117.

¹²Page 118.

¹³Pages 119, 120.

¹⁴Page 121.

¹⁵Page 121-124.

height the disease there is a loss of semen, and a period of lewdness and shamelessness exists with the highest type of delirium. If there is a remission of the disease, the patient becomes quiet and depressed because they are now conscious of their affliction.

Areteaus¹⁶ relates an interesting story of a maniacal patient (Tobsuchtigen). The patient was entirely rational when at his place of business and carried on the same correctly and satisfactorily. But as often as he had occasion to leave his business place, he was attacked with a violent rage, which subsided when he returned to his business affairs.

However much we are satisfied with the diagnosis of Areteaus, in which he shows his extensive power of observation¹⁷ and proves himself worthy without question, of the title given him by Sprengel¹⁸ as the greatest observer next to Hippocrates; his method of the treatment of the disease so well diagnosed deserves little praise. It is indeed only in our time that we have shown that the labours of Areteaus on the treatment of melancholia do not suffice.¹⁹

Psychic measures were entirely overlooked, and the plan of treatment restricts itself to blood letting, the cupping glass, emetics and purgatives by hellebore. The blood letting should be performed on the right side, "ut a jecore opportuna fiat effusio; et enim hoc viscus et sanguinis fons est, et bilem generat, quorum utrumque Melancholiam alit."

The cupping glass should be placed over the hepatic region or on the scalp which has previously been shaved.

In another instance²⁰ he directs that the walls of the patient's rooms should be smooth and polished, and should have

¹⁶Page 120.

¹⁷He has made this especially clear in that he makes a marked distinction between the observance of symptoms arising from an independent form of mental disease and those psychic symptoms due to poisoning, alcoholism and the like.

¹⁸Hist. of Medicine H. B. S. 177 (Gesch. d. Arzneik. H. B. S. 177.)

¹⁹De Curatione morb. diuturn. Lib. I, Cap. V. Curatio melancholiae (Edit. Vindob. 1790, page 459-468.)

²⁰De morb. acut. Lib. I. Cap. I.

no decorations, because paintings on the walls make the spirit of the patient restless."²¹

I have felt that, as an addendum to Friedreich's description, what we possess of the original of Aretaeus might be added. I have chosen to give a combination of Adams' and Reynolds' translation—Moffat's translation of the description of melancholy has already been utilized in part, hence one can compare the three. In the cases of the use of the words mania, melancholia, insanity and the like, I have put the original Greek words in parenthesis, principally from Adams' edition, Sydenham Society 1856. It is greatly to be regretted that Aretaeus' chapters on phrenitis and lethargy are lost. The treatment of phrenitics is preserved however.

ON MELANCHOLY. (περι μελαγχολιως)

ARETAEUS.

Black bile, if it make its appearance in acute diseases of the upper parts of the body, is very dangerous; or, if it pass downwards it is not free from danger. But in chronic diseases, if it pass downward, it terminates in dysentery and pain of the liver. But in women it serves as purgation instead of the menses, provided they are not otherwise in a dangerous condition. But if it be determined upwards to the stomach and diaphragm, it forms melancholy (μελαγχολιην); for it produces flatulence and eructations of a foetid and fishy nature, and it sends rumbling wind downwards, and disturbs the understanding. On this account, in former days, these were called melancholics and flatulent persons. And yet, in certain of these cases, there is neither flatulence nor black bile, but mere anger and grief and sad dejection of mind; and these were also called melancholics because the terms *bile* and *anger* are synonymous in import, and likewise *black* (μελαινα) with *much* (πολλη)

²¹A similar instance is taken from Portal (Collection of selections from treatise XIX. B. S. 363) and confirmed by him in his own observations. He was treating a patient who in his delirium repeated the following words, "I am not afraid." Portal noticed that the wall of the alcove in which the bed stood was hung with tapestry on which was pictured a battle, and presumed that the picture might be affecting the weakened spirit of the patient. He had the tapestry removed and the delirious talk of the patient ceased.

and *furious* (θηρωδης). Homer is authority for this when he says:

"When with a gloomy frown
The monarch started from his shining throne—
Black choler filled his breast that boil'd with ire,
And from his eye-balls flashed the living fire."

The melancholic when likely to die of the disorder are thus affected.

It is a lowness of spirit from a single phantasy without fever; and it appears to me that melancholy is the commencement and a part of mania. For in those who are mad, (*μανη*) the understanding is turned sometimes to anger and sometimes to joy, but in the melancholics to sorrow and despondency only. But they who are mad are so for the greater part of life, becoming silly, and doing dreadful and disgraceful things; but those affected with melancholy are not every one of them affected according to one particular form; but they are either suspicious of poisoning, or flee to the desert from misanthropy, or turn superstitious, or contract a hatred of life. Or if at any time a relaxation takes place, in most cases hilarity supervenes, but these persons go mad. (*μαίνονται*)

But how and from what parts of the body the most of these complaints originate, I will now explain. If the cause remain in the hypochondriac regions, it collects about the diaphragm, and the bile passes upwards or downwards in cases of melancholy. But if it also affects the head from sympathy and the abnormal irritability of temper change to laughter and joy for the greater part of their life, these become mad (*μαίνονται*) rather from the increase of the disease than from change of the affection.

Dryness is the cause of both. Adult men, therefore, are subject to mania and melancholy, or persons of less age than adults. Women are worse affected with mania than men. As to age, towards manhood and those actually in the prime of life. The seasons of summer and of autumn engender, and spring brings it to a crisis.

The characteristic appearances then are not obscure, for the patients are dull or stern, dejected or unreasonably torpid, without any manifest cause; such is the commencement of

melancholy. And they also become peevish, dispirited, sleepless and start up from a disturbed sleep.

Unreasonable fear also seizes them if the disease tend to increase when their dreams are true, terrifying and clear; for whatever, when awake they have an aversion to, as being an evil, rushes upon their vision in sleep. They are prone to change their mind readily; to become base, mean-spirited, illiberal and in a little time, perhaps, simple, extravagant, munificent, not from any virtue of the soul, but from the changeableness of the disease. But if the illness become more urgent, hatred, avoidance of the haunts of men, vain lamentations; they complain of life and desire to die. In many, the understanding so leads to insensibility and fatuousness, that they become ignorant of all things or forgetful of themselves and live the life of the inferior animals. The habit of the body also becomes perverted; color a darkish-green, unless the bile do not pass downward, but is diffused with blood over the whole system. They are voracious, indeed, yet emaciated; for in them sleep does not brace their limbs either by what they have eaten or drunk, but watchfulness diffuses and determines them outwardly. Therefore the bowels are dried up, and discharge nothing; or, if they do, the dejections are dried, round, with a black and bilious fluid in which they float; urine scanty, acrid, tinged with bile. They are flatulent about the hypochondriac region; the eructations fetid, virulent, like brine from salt and sometimes an acrid fluid, mixed with bile, floats in the stomach. Pulse for the most part small, torpid, feeble, dense, like that from cold.

A story is told that a certain person, incurably affected, fell in love with a girl, and when the physicians could bring him no relief, love cured him. But I think that he was originally in love and that he was dejected and spiritless from being unsuccessful with the girl and appeared to the common people to be melancholic. He then did not know that it was love; but when he imparted the love to the girl, he ceased from his dejection and dispelled his passion and sorrow and with joy he awoke from his lowness of spirits and he became restored to understanding, love being his physician.

CHAPTER VI. ON MADNESS. MANIA. (*μανιας*)

The varieties of forms of mania are infinite, but they are all included under one genus. For it is altogether a chronic derangement of the mind without fever. For if fever at any time should come on, it would not owe its peculiarity to the mania, but to some other incident. Thus wine inflames to delirium in drunkenness, and certain edibles, such as mandragora and hyoscyamus, induce madness; (*μανη*) but those affections are never called mania (*μανη*); for springing from a temporary cause they quickly subside, but madness (*μανη*) has something confirmed in it. There is no resemblance in the dotage which is the calamity of old age, to this mania, for it is a torpor of the senses and a stupefaction of the gnostic and intellectual faculties by coldness of the system. But mania is something hot and dry in cause and tumultuous in its acts. And, indeed, dotage commencing with old age never intermits, but accompanies the patient until death; while mania intermits and with care ceases altogether. And there may be an imperfect intermission if it take place in mania when the evil is not thoroughly cured by medicine, or is connected with the temperature of the season. For in certain persons who seemed to be freed from the complaint, either the season of spring, or some error in diet or some incidental heat of passion has brought on a relapse.

Those prone to the disease are such as are naturally passionate, irritable, of active habits, of an easy disposition, joyous, puerile, childlike, likewise those whose disposition inclines to the opposite condition, namely, such as are sluggish, sorrowful, slow to learn, but patient in labor, and who, when they learn anything soon forget it; those likewise are more prone to melancholy, who have formerly been in a mad condition. [Reynolds puts this better. He says the latter class is more prone to melancholy, while the former is more liable to mania.] But in those periods of life with which much heat and blood are associated, persons are most given to mania, namely, those about puberty, young men, and such as possess general vigor. But those in whom the heat is enkindled by black bile and whose form of constitution is

inclined to dryness, most readily pass into a state of melancholy. The diet which disposes to it is associated with voracity, immoderate repletion, drunkenness, lechery, venereal desires. Women also sometimes become affected with mania from want of "purgation of the system," (amenorrhoea) when the uterus "has attained the development of womanhood;" but exercises a strong influence on their sexual feelings, "but the others do not readily fall into mania, if they do, their cases are difficult to manage." [Some are not so readily affected, but when they are so, become violently deranged.] These are the causes "and they stir up the disease also, if from any cause an accustomed evacuation of blood, or of bile, or of sweating be stopped." Men may also be affected in like manner if anything cause an obstructed flow," etc.

"And they with whose madness joy is associated," [in the cheerful forms of mania,] laugh, play, dance, night and day, and sometimes go openly to the market crowned, as if victors in some contest of skill; this form is inoffensive to those around. Others have madness attended with anger, and these sometimes rend their clothes and kill their keepers and lay violent hands upon themselves. This miserable form of disease is not unattended with danger to those around. But the modes are infinite in those who are ingenious and docile,—untaught astronomy, spontaneous philosophy, poetry truly, from the muses; for docility has its good advantages even in diseases. In the uneducated, the common employments are the carrying loads and working at clay—they are artificers or masons. They are also given to extraordinary phantasies; for one is afraid of the fall of the oil cruets . . . and another will not drink, as fancying himself a brick, and fearing lest he should be dissolved by the liquid."

Reynold's translation is so much nearer the facts that I give it here in extenso. The forms of this disease are infinite; the ingenious and clever have become astronomers without instruction, self-created philosophers and poets by inspiration of the muses, so that even in disease a liberal education has some advantage, whilst the unlettered occupy themselves in carrying weights and working like carpenters and masons; beset with strange fancies, one man is in constant fear that

some oil cruets will fall and crush him, while another will not drink, having a notion that he is a brick (clay bricks of that day) and will be melted by the liquid.

This story also is told: A certain joiner was a skillful artist while in the house, would measure, chop, plane, mortise and adjust wood, and finish the work of the house correctly; would associate with the workmen, make a bargain with them and remunerate their work with suitable pay. While on the spot where the work was performed he thus possessed his understanding. But if at any time he went away to the market, the bath, or any other engagement, having laid down his tools, he would first groan, then shrug his shoulders as he went out. But when he got out of sight of the domestics, or of the work and the place where it was performed he became completely mad; yet if he returned speedily he recovered his reason again; such a bond of connection was there between the locality and his understanding.

The cause of the disease is seated in the head and the hypochondriac region, sometimes commencing in both together and the one imparting it to the other. In mania and melancholy, the main cause is seated in the bowels, as in phrenitis (*φρενιτικοίσι*) it is mostly seated in the head and the senses. For in these (phrenitis) the senses are perverted, so that they see things not present as if they were present, and objects which do not appear to others, manifest themselves to them; whereas persons who are mad (*μαινόμενοι*) see only as others see, but do not form a correct judgment on what they have seen.

"If, therefore, the illness be great they are of a changeable temper, their senses are acute, they are suspicious, irritable without any cause, and unreasonably desponding when the disease tends to gloom; but when to cheerfulness they are in excellent spirits; yet they are unusually given to somnolency; both are changeable in countenance, have headache or else heaviness of the head; they are sharp in hearing, but very slow in judgment; for in certain cases there are noises of the ears, and ringings like those of trumpets and pipes. But if the disease go on to increase, they are flatulent, affected with nausea, voracious and greedy in taking food, for they are

watchful and watchfulness induces gluttony. Yet they are not emaciated like persons in disease (*embonpoint* is rather the condition of melancholics) and they are somewhat pale."

[Reynolds is here again much clearer clinically, "when the disease is violent, perception is clear and distinct, the patient suspicious, irascible, on no pretext whatever, and unreasonably dejected, in these, mania turns to settled gloom; where it has the cheerful tendency they become gay. Some are unreasonably watchful, both sorts have their countenances altered, they are affected with pain, or a sort of weight in the head, the sense of hearing is exceedingly acute, while the understanding is very dull; many are annoyed with a singing or buzzing in the ears like that of pipes or flutes; if the disorder gets worse they become flatulent, affected with nausea, voracious and violent in seizing their food, for they keep awake and watching creates hunger; they do not become emaciated like valetudinar-ians, for in this attack they are rather inclined to be stout, although they are pale.]

But if any of the viscera get into a state of inflammation, it blunts the appetite and digestion; the eyes are hollow and do not wink; before the eyes are images of an azure or dark color in those who are turning to melancholy, but of a redder color when they are turning to mania, [afflicted with mania,] along with purple phantasmata, in many cases as if of flashing fire, and terror seizes them as if from a thunderbolt. In other cases the eyes are red and bloodshot.

At the height of the disease they have impure dreams, and irresistible desire of venery, without any shame and restraint as to [open] sexual intercourse, and if roused to anger by admonition or restraint, they become wholly mad. (*ἐκ μαινονται*, furious). Wherefore they are affected with madness in various shapes; [some show their madness in one way, some in another;] some run along unrestrainedly, and, not knowing how, return again to the same spot; some, after a long time come back to their relatives; others roar aloud, bewailing themselves as if they had experienced robbery or violence. Some flee the haunts of men, and going to the wilderness, live by themselves.

"If they should attain any relaxation of the evil," [when

the disorder begins to abate,] they become torpid, dull, sorrowful for having come to a knowledge of the disease; they are saddened with their own calamity.

Another Species of Mania.

Some cut their limbs in a holy phantasy, as if thereby propitiating peculiar divinities. This is a madness of the apprehension solely; for in other respects they are sane. They are roused by the flute and mirth, or by drinking, or by the admonition of those around them. This madness is of divine origin, and if they recover from the madness they are cheerful and free of care, as if initiated to the god; but yet they are pale and attenuated and long remain weak from the pains of the wounds.¹

I now purpose presenting the first part of a translation of the work of Falk, spoken of in my first paper.

STUDIES ON THE PSYCHIATRY OF THE ANCIENTS.

BY DR. FRIEDRICH FALK IN BERLIN.

That which is spoken of as new by the present generation is not infrequently the heritage of long gone by centuries. French's Klinik of liver diseases. Th. 1.s. 1.

In the "Elements of the Immediate Future of Medicine," Damerow² says, "I am astonished in studying the historical sources of the teachings concerning insanity to find the great wealth of material in the broad field of psychiatry which towers about on all sides," and he then discourses in the warmest terms on historical psychiatrie research.

His words have not remained without influence, independent of the fact that he himself published several pertinent papers. The history of psychiatry has had since then only so much attention given to it, as special works or single portions have appeared. The larger works of German and of foreign psychiatrists, which have appeared in this century,

¹Our author, as Petit remarks, evidently refers here to the worship of Cybele; on which see in particular, the *Atys* of Catullus and Apuleius, viii.

²Damerow, Berlin, 1829.

either give no historical retrospect or treat of the times before Pinel very hastily. The historical introduction in Heinroth's Text Book contains many inaccuracies, while the work of Calmeil deals chiefly with modern times. Morel¹ in his descriptions of ancient psychiatry which we find in his *Traité des Maladies Mentales*, seems to have himself worked very little with the original sources. Arnold,² it is true, speaks of his scientific interest for history, but gives no connected historical presentation, and that which Bucknill and Tuke³ have attempted is rather scanty. After looking through Friedreich's books (*Versuch einer Literärgeschichte der Pathologie u. Therapie der psychischen Krankheiten*. Würzburg, 1830. *Historische-kritische Darstellung der Theorie über das Wesen und den Sitz der psychischen Krankheiten*. Leipzig 1836: *Systematische Literatur der Arztlischen und gerichtlichen Psychologie*. Berlin, 1833) I find the judgment of Thierfelders who calls the *Literargeschichte* an uncertain guide in this field to be not unfounded.

Mental medicine does not fare any better in the standard text books of medical history, and the psychiatry of the ancients is disposed of with very hasty sketches; whereas her sister sciences are richly provided for, or even very complete, solid contributions made, as for instance the *History of Obstetrics* by Osiander and von Siebold.

With this introduction, may I venture once more to take up the sorting of the psychiatric material which has been gathered at different times by different peoples. On the one hand, I had hoped by careful investigation and illumination of the psychiatric ideas of earlier times to show the development of psychiatry in a different manner as Leuthold and Schlager (*Die Psychiatrie in ihrer Entwicklung*. Wien, 1860. *Beilage zur oesterreichischen Zeitschrift für praktische Heilkunde*. VI. 17.) attempted within the limited space of a

¹Calmeil. *De la folie depuis la renaissance des sciences en Europe jusqu'au dix neuvieme siecle*.

²Observations on the nature, kinds, causes and prevention of insanity, lunacy or madness, Vol. 1, Tr. by Ackermann, p. 15.) 2nd edition, N. Y. Acad. Med. 1806, (portrait.)

³A Manual of Psychological Medicine, containing the history, nosology, description, statistics, diagnosis, pathology and treatment of insanity, 1858.

lecture. On the other hand I had hoped that in this manner one could more closely approach many problems which occupy psychiatrists of the present day and which have not found any satisfactory solution.

When as the first result of my studies I present these considerations on the psychiatry of classical antiquity, even though this portion does not include the most ancient times of medicine, namely that of the Egyptian and Biblical medicine, I have done so because it seemed to promise more satisfactory results, even if more difficult to work out. I at this time discharge the pleasant duty of thanking Professor Dr. A. Hirsch for his share in the work which follows, especially for his friendliness in placing before me the sources themselves and in the best editions.

SPECIAL LITERATURE OF THIS PERIOD.

After the custom of other authors I mark with an asterisk(*) the studies which I could personally inspect. The not very extensive ancient literature is hardly available at the present time. The rather extensive literature on Lykanthropy is not taken account of in this list.

*Nasse: *De insania, commentatio secundum libros Hippocraticos.* Lips. 1829.

*Lippmann. *Veterum opiniones de deliriis.* Diss. Berol, 1833.

*Flemming: *Psychiatrie des Celsus.* Jacobi und Nasse Zeitschrift f. Psychiatrie. 1838.

Thoméé. *Historia insanorum apud Graecos.* Diss. Bonn. 1830.

*Sprenghel. *Plato uber Geisteszeirutung.* Nasse. Zeitschrift f. psychische Aerzte. 1818.

Oegg. *De Sede et originae monbor psychicor comment. historica.* Herbipolis. 1823.

*Schramm. *Die Seelenstörungen nach Caelius Aurelianus.* Corresp. blatt f. Psych. 1864.

*Semelaigne. *Etudes historiques sur l'alienation mentale dans l'antuiquité.* Journal med. mentale. 1864.

Trélat *Recherches historiques sur la folie.* Paris. 1829.
Morel leans particularly on this last author in the opening

historical portion of his treatise. I regret that it was not possible for me to avail myself of it.

Before we turn to the medical authors, a hasty glimpse should be directed to the historians and poets of the periods. Mental disorders are processes which not only constitute a severe infliction for those afflicted, but in many respects they also interest their fellowmen. Naturally no question of infection or epidemic extension arises (I leave for the time being the interpretation of certain psychopathies, particularly of the Middle Ages), and therefore their occurrence did not claim such attention from contemporaries that it was deemed worthy of extended description from non-medical authors. We cannot find in the writings of such authors the amount of material as for instance we find concerning the important diseases of the masses written by the historians. Nevertheless it is enough to record the fact that not infrequently cases of mental disorder were related. The heroic poems of the Greeks contain many examples.¹ Homer mentions mental disturbances in many places.² We find in Homer the expressions *εζελεσδας*, *φρενας* and *βλαπτειν*, in which *φρενες* the diaphragm, as the material seat of the mental functions is indicated.³

As Nägelsbach has explained in distinction to *συμος*, the non-material principle of the same. Other later writers describe many unquestioned cases of insanity. See Polyibius. IV. 20; Plutarch, Lib. de cohibenda via, de Lysandro, Lucretius, de natura rerum, lib. III. Horace, Epist. II. 2). Yet at the same time there are cases here which would not be named insanities.⁴

On the other hand they regard many deeds with reverence, or also with anger (Herostratus) in which an unprejudiced physician would only see symptoms of a mental disorder. I

¹Cicero has gathered them together in his Tusculanen III. 5.

²Friedreich has collected these Grundzügen der Homerischen Psychologie. Zeitschrift f. Psychiatrie Vol. VI. Also compare Daremberg. La médecine dans Homère. p. 54.)

³I would remark at this time that when further mention of phrenes as the seat of the soul is met with, it is not always the diaphragm alone that is meant but closely related organs also, namely the liver.

⁴Compare Platus, Captivi: Virgil: Lib. VI.

shall not go further into the individual cases in this place, which only lend support to the opinion that the insane have existed at all times.

64 W. 56th St., New York.

(TO BE CONTINUED.)

DRUNKENNESS AS A DEFENCE FOR HOMICIDE.

BY CLARK BELL, Esq., LL.D.

NEW YORK.

THE recent commutation of the sentence of death passed upon John Wynne, at Honolulu, Hawaii, by President Taft, is of great public interest.

Wynne was convicted of murder of the third engineer of the Steamship Rosecrans, in the harbour of Honolulu, while intoxicated.

The action of President Taft in this case is of very great public interest.

The severity of the dicta of the Common Law of England, that drunkenness could not be urged as a defence for crime, has stood undisputed for centuries.

It was peculiar to this class of cases, but where a man was so drunk at the time of the act as not to be conscious of his act, it seemed to lack that element which stands at the very foundation of crime "*intention.*"

How can a man dead drunk premeditate?

How could it be said to be with malice aforethought?

The Scotch Judge who tried a boy dead drunk, who had killed his intimate friend and companion in a drunken brawl and fight, actually without being conscious of his act and of course not capable of considering it at all was held to be under the law and the drunkenness no defence.

Norman Kerr, who was at the head of the English scientists and an authority on inebriety, may be said to have been instrumental, more than any other man of his time, in softening the harshness of the old rule.

Kerr asserted that inebriety was a disease and must be so regarded and treated, and must be so considered.

Like insanity, he decided that we apply the same issues and tests that we would in insanity cases.

If the man understands the nature, character and the consequences of the crime, he was responsible, providing he was not the victim of a delusion that dominated his action.

Could this reasoning, and this test be applied, to the man so unconsciously drunk, as not to know at all what he was doing?

The question of intent, of premeditation, was out of the case, but under the old rule it was not a defence.

The evolution of judicial thought and decision was shown even in England; at that time there was no appeal from a verdict in a murder case.

This decision of President Taft is in exact accord with what the writer believes is the law of our country at this moment.

We think it will be acceptable to our courts and judges as the correct and actual state of the law.

The President of the United States is of a judicial temper. He is a very competent jurist, and an excellent judge.

Dr. Norman Kerr helped to make this decision, regarding and studying inebriety and taking it upon its pathological and its scientific side.

Like insanity it had to be subject to the same standards and same tests.

The language of President Taft is "Drunkenness is no excuse for crime, but it may be inconsistent with a state of mind necessary to constitute a certain degree of crime."

It is a step forward and upward in the elementary principle involved in the law on its evolutionary side and in accord with our growth in the science of the law.

SELECTIONS.

CLINICAL NEUROLOGY.

TREATMENT OF PARASYPHILIS OF NERVOUS SYSTEM IN LIGHT OF RECENT RESEARCH. PARESIS AND TABES DORSALIS (Monthly Cyclopædia, 1910, October.) By Tom A. Williams, MB. CM. Edin., Washington, D. C.

Based upon leptomeningitic pathogenesis of metasymphilis cases were treated intensively by mercury with uniform complete success. Three of the author's and three of Dana's cases are cited.

The reasons for the failure of mercury in some hands are discussed. Early diagnosis is appealed for.

The prognosis in the light of the paper becomes quite favorable, especially when the prodromes of Tabes and Paresis are adequately treated by injections into vein or muscle of proper preparations of mercury. An instance of grave lues from Vincent makes this evident.—*Author's Abstract.*

POLIOMYELITIS.—New facts concerning its etiology, early diagnosis and treatment. Monthly Cyclopædia, 1910, November. Tom A. Williams, MB. CM., (Washington, D. C.)

The Ohio epidemic showed that carriers, apparently healthy, convey the virus from case to case. Some of these are abortive, undiagnosed cases. Hence isolation, as at present conceived, of known cases is ineffectual.

Instances of contagiousness and non-contagiousness from the Washington epidemic (500 cases) are described. A girl aged eleven in contact with eighteen others did not give it to any. A single visit in each instance produced seven cases in one locality.

Perhaps the noxa is protozoan and intermediately con-

veyed. Perhaps many persons are immune or do not sicken upon infection.

The cerebrospinal fluid after a few days is cytologically like that in lues, i. e., lymphocytic. Huge acroplages later appear.

Early diagnosis in doubtful cases is thus possible.

Treatment by injection of Hg. Cl intramuscularly seemed to arrest ascending paralysis and save life in one case.

To minimize pain and irritability after acute stage, galvanism proves efficient in cases seen by the author in Washington epidemic. The warm bath is useful in early stages, as well as later to support weak limbs and facilitate voluntary movements.

For residual paralysis galvanism is the best aid.—*Author's Abstract.*

CLINICAL PSYCHIATRY.

VIOLENT TIC OF HYSTERICAL FORM REMOVED IN ONE DAY BY PSYCHOTHERAPY.—Tom A. Williams, M. D., CM. Edin., Washington, D. C., Corresp. Memb. Neurolog. Society of Paris, etc.

A striking instance of the success of rational procedure where empirical ones had failed was shown to the Washington Medical Society at two meetings in January. A young Hebrew man in North Carolina with iliocolitis suddenly developed on going to bed one night an intense clonic contracture of the recti abdominis and diaphragm. This recurred every night, often keeping him awake for hours. It became less and less controllable, and soon occurred on sitting during the day. Then it began to come on standing, until his life was a burden.

The application of electricity with the fervid assurance of its efficacy made no impression, nor did "powerful and infallible" medicines.

The boy came to Washington, and was at once referred to the writer by his physician, Dr. Martin. On recognizing that the disorder was a tic of hysterical type, the psycho motor

discipline devised by Brissaud was employed. (See author on "Tics and Spasms," in *Monthly Cyclop.*, 1910, *Internat. Jour. Surg.*, 1910. *Va. Semi-monthly*, 1908, *South. Med. Jour.*, 1909.)

In this case, it consisted of inducing the patient to perform slow, even, rythmical contractions of the recti while taking slow deep breaths. In this way, control was gained over the muscles, so that when the paroxysms were about to begin, he had now a means of mastery, and substituted the newly learned movement for the automatic one which formerly took its own bent. He learnt in one day; too quickly as it proved; but after a slight relapse two days later, another sitting cured him; and he was shown recovered at the next meeting of the society. Even for this very simple case, empiricism had failed where a little psychopathological knowledge reached the cause and lead to the very simple means used for its removal without either psychoanalysis nor reconstruction of the mentality. Such a symptomatic cure must of course be extended to a pathogenic one, i. e., the re-education of the patient's hysterizability. To indicate even the elements of this is another chapter. (See author on *Hysteria*, *Am. Med. So.*, 1910, *Aug.*, etc.)

INDIGO IN THE HUMAN ORGANISM.—By Dr. R. V. Stanford.

It has long been known that traces of indigo may often be obtained from human urine, and many conflicting statements have been made as to the occurrence of the substance in the urine of the insane, and as to its clinical significance. The present paper gives an account of the results so far obtained by the author in the course of an attempt to clear up the subject. Evidence is put forward against the common view that the parent substance of indigo in urine (the so-called "indican") is potassium indoxylsulphate. The methods which have been employed for the quantitative estimation of indigo in urine are examined and shown to be illusory, and the conclusions which have been drawn regarding the importance of urinary indigo in mental disease are discussed in view of this fact and with the help of new experimental material.

GYNCOLOGICAL CONDITIONS COINCIDENT WITH MENTAL DISTURBANCES.—By Mr. E. Tenison Collins.

Disorders of the female pelvic organs are often accompanied by disturbances of the nervous system, such as headache, epilepsy, insomnia, hallucinations, the cure of which is followed by the disappearance of the disturbances. Where there is abnormal menstruation, or where the mental state is worse or exaggerated during menstruation, patients should be examined and treated as they would be in the case of normal subjects.

Treatment of, or operation upon, the reproductive organs is inadvisable for amelioration of insanity alone; but if disease, malformations, displacements, or new growths exist, medicinal or operative treatment should be carried out, and the mental condition will probably improve, more especially if the local disease is previous to the insanity.

Notes of cases operated on are given.

METABOLISM IN THE INSANE.—By Mr. R. L. Mackenzie-Wallis.

Investigations of the metabolism of insane persons have shown that there is very little variation from normal individuals. Certain differences, however, are noticed in the products derived from cellular activity, especially in some forms of insanity. The present communication attempts to assign a *locus* for these changes, and it is suggested that the ductless glands in the body play a very prominent part. The effects of disease of these glands on metabolism is well known and since they are richly cellular, provide further support to this view. This explanation agrees more closely with the observed symptoms than the "general toxæmia" view of insanity.

IMPROVEMENT AND DETERIORATION. THE SAYINGS OF SEARCY, THEREON. By Dr. J. T. Searcy, M. D., LL. D., of Tuscaloosa, Ala., Superintendent of the Alabama Insane Hospital, is the phyhological philosopher of the American Medico Psychological Society.

Heredity is the transmission of habits of action along lines of descent.

A line of descent is technically called a phylum, and is the continuous living substance, which comes along time, through succeeding generations, acquiring habits of more or less excellence, adjusting itself to its changing environments. A complete continuity of living material composes the phylum.

A phylum, from this standpoint, may be studied as a whole and looked upon as a living entity of itself.

The study of the phylum, as a living whole, constitutes the principal figure in modern science regarding living things.

The habits with which the continuous phylum is endowed present two features:—the one is structural or morphologic; the other is functional or physiologic. We witness the phylum as it passes through the stages of succeeding generations, has habits of assuming parts, organs, structures, forms, shapes, colors, which are peculiar to the phylum alone. This is its morphology.

In the non-sexed animals there is a single line of descent or phylum. In sexed animals, the phyla of two parents coalesce. Two genetic, carry into the combination the habits of the multiple ancestral lines which compose them, the latest being the most potent and evident.

Ability to vary is a property of phyla, and is a characteristic of all living things. Ability to vary, to suit changing environment is a necessity for living continuance.

In the vicissitudes and competitions of life, the general tendency of the agencies, which compose their environments, is to eliminate phyla.

There is no stand-still-level of rest and idleness. A cessation of effort in the length of a single generation or of several, begets a decline of abilities. This makes the constant observation of the rising and falling of the capacities of individuals, families and races. Necessity to live is the mother of effort and of improvement. When and where there is no necessity, effort generally stops and deterioration of ability sets in. The idle rich and the idle poor deteriorate.

Air, or oxygen, water, warmth and food, are the necessities of life. Every cell in the body has to have these things constantly provided for it, or it cannot live. The same general necessity exists for the whole man. The first object of effort

of every living thing, man included, is to obtain these necessities from its environment. The accumulation of wealth and property is really and fundamentally an accumulation of an excess of these "necessaries of life," or of a means of obtaining them.

FORENSIC PSYCHIATRY.

NYMPHOMANIA AND WITNESS CAPACITY.—The Texas Court of Criminal Appeal affirms in *Jenkins vs. State* (121 S. W. R. 542), a principle of witness capacity of great importance to those who suffer from hysteric accusation. The case was one of alleged rape on a minor below the age of consent. The court justly held that the fact whether the prosecuting witness was laboring under the disease of nymphomania could not be established by the general reputation of the blood relatives in the ascending line. On the trial she testified that she was about 13 years old; that she had voluntarily entered into intercourse with the accused; that she had been doing such things ever since she was nine years of age, with a great many persons. Examination by physicians showed a full development of parts, etc., but there was a division of opinion as to whether the girl was a nymphomaniac or not. Whether, if her mother and blood relations were people of inordinate passions, it would predispose the girl to nymphomania, the court does not decide, but merely that there was no error in refusing to permit the accused to prove the general reputation for chastity of the mother and sisters of the girl, as that could throw no light on the issue before the court, because reputation is one thing, and the facts another.

The court also holds correct an instruction which told the jury that if they believed and found from the preponderance of the evidence in this case that the girl, at the time she testified in the case, was laboring under such a defect of reason from nymphomania or other disease of the mind, and under such derangement of the mind, as to render her incapable of receiving a sound mental impression of the transaction regard-

ing which she testified, or if the jury believed that she had the capacity to receive such mental impression as would render it impossible for her to retain and impart such impression correctly, or if she was laboring under such defect of reason from disease and derangement of mind as would render it impossible for her to know and understand the nature and obligation of an oath, then in law she would not be a competent witness, and the jury should disregard her testimony altogether.

This decision is along lines adopted by appeal tribunals in other states and the United States Court. Of course simple precocious proclivity to sexual intercourse is not necessarily nymphomaniac into which an irresistible impulse must suppose in the present as in a similar one in Chicago, the girl offered sexual intercourse for money to boys about her own age, the offering would have a clear motive and not be nymphomania, an irresistible tendency, not a proclivity to harlotry. K.

NEUROPATHOLOGY.

THROMBOTIC SOFTENING AND "ACUTE MYELITIS." By Charlton Bastian, London.

There seems little room for doubt that the common "softenings" met with in the brain and spinal cord, are in all essential respects similar. In the brain it is generally acknowledged that these softenings are due to vascular occlusions, followed by degenerative processes, and it is taught that they are the results of non-inflammatory degeneration, while those of the spinal cord are due to inflammation.

There is absolutely no reason for supposing inflammation should be more common in the spinal cord than in the brain; the main cause of this anomalous point of view is the fact that embolism and thrombosis—both common in the brain—are comparatively easy to detect, while embolism in the cord is rare, and thrombosis difficult to detect, because of the comparatively minute vessels.

It is a well known fact that acute myelitis is met principally among: 1st, elderly persons with degenerated vessels, and often

failing heart power. 2nd. Young or middle aged adults suffering from syphilis; and, 3rd, children or adults actually suffering from other infectious diseases, or during convalescence therefrom. In these are found the best known and most potential causes for thrombosis, thickening of the arteries, and toxins associated with feeble cardiac power.

The conditions in which the so-called acute myelitis is most prone to occur, are found to be those that would especially favor the occurrence of thrombosis. There are anatomical reasons why embolism is rare in the spinal cord and why thrombosis should be especially prone to occur in this part of the nervous system.

We have, then, the nature of the vascular supply of the cord favoring thrombosis; again it occurs in persons and under conditions in which such a process is known to be favored and when there is no reason for supposing a primary inflammatory process should be set up. Lastly the actual morbid anatomy of the lesions in the majority of cases of so-called acute myelitis in which an early examination has been possible, we meet with an absence of the distinctive signs of inflammation.

As to the symptoms of acute myelitis. The onset is sudden, with little or no elevation of temperature or other febrile symptoms, quite in accordance with the onset of the disease, as a result of some logical change leading to the occlusion of vessels in the affected region of the spinal cord. As to acute poliomyelitis, there is very much evidence against the view that inflammation is at all a common cause, whether regarded from the point of view of morbid change, or of the often sudden onset with either complete absence or presence of only very slight febrile symptoms. Still, as in the more general affection, so here, there is no reason to deny that inflammation may at times be a cause, while admitting that either vascular occlusion or acute primary degeneration of the very specialized ganglion cells, will suffice to account for the great majority of cases.

This latter conclusion is in no way invalidated by the fact that an epidemic, strongly suggestive of an infectious origin, sometimes occurs, since the liability to thrombosis after acute specific infections is well known, and due to morbid changes in the blood, also the irritation of toxins on the vessel walls

might undermine the nutrition of the great ganglion cells.—
Excerpt from Beadie's Abstract, St. Paul Med. Jour.

PALPABLE ARTERIES IN CHILDREN.—*The Hospital* quotes from *Munchener Medizinische Wochenschrift*, the following: Dr. Hamburger draws attention to a curious phenomenon in certain children. Under normal conditions the walls of the superficial arteries, such as the radial or temporal, cannot be felt on palpation; one only feels the pulse, that is, the contraction of the artery, but not the arterial wall itself. In certain cases, however, the author states that he has been able definitely to feel the walls of the temporal and radial arteries and to convince himself of a certain degree of rigidity of the walls. He is of opinion that this rigidity is in no way of the nature of an arterio-sclerosis, but of a spasmodic kind, as it is very variable and may be accentuated at one moment and disappear entirely the next. He suggests that it arises from a certain tonic of the vascular musculature and is a manifestation of a general neurotic or neurasthenic condition. Most of the cases were children of an irritable temperament, complaining frequently of headaches, palpitations and the like. Other evidences of an exaggerated vaso-motor irritability were generally present; sudden flushing or pallor of the face, cold extremities, frequent sweatings, dermatographism, and irregular respiratory pulse.

NEURO-SURGERY.

ASEXUALIZATION FOR PERVERTS was advised by Dr. Hamilton D. Wey, physician and supervisor of Manual Training of the New York Reformatory at Elmira, in his report for 1894 as follows:

The contemplation of this phase of human nature, exaggerated and perverted sexual desire, is neither pleasant nor profitable to a general reader, and it would be out of place in these notes were it not for the fact that it constitutes a condition in the institutional life of adolescents and children at the age of puberty which cannot be overlooked or ignored.

The question of sterilization—by emasculation or resection of the *vas deferens*—of the sexual pervert and onanist, whose repeated acts lead to premature disease and mental overturning, is a question in practical penology.

At the present time there is a sentimentality opposed to such a course and in favor of the idea that the pursuit of pleasure is an inalienable right. Which is the more humane treatment: to temporarily deprive of the opportunity of indulging in an insistent morbid desire and perversion of a normal function as is done now by imprisonment, or to terminate a function, and incidentally the power of propagation, that causes unrest, unhappiness, and criminality in certain morbidly-constituted and ill-adjusted individuals?

Dr. Wey's entire report for that year with its text on anthropology and photograph illustrations will prove interesting reading now. The subject as then presented is not out of date though the report is nominally a back number. His reasoning on vasectomy is yet pertinent.

NEURO-THERAPY.

LOCAL ANAESTHESIA WITH QUININE AND UREA HYDROCHLORIDE.—Dr. Nicholson of St. Louis related his experience with thirty-two cases that quinine and urea hydrochloride was destined to occupy a prominent position as a local anæsthetic. The greater length of time required after the injection of quinine urea hydrochloride before the anæsthetic effect was fully manifest was its principal disadvantage. Other speakers expressed their satisfaction with this agent.

“606”—Dioxydiamidoarsenobenzol (606) is a compound similar to a number of arsenical preparations with which we are more or less familiar. The best known forms of organic arsenic are atoxyl, arsacotin, cacodyl or sodium cacodylate, arsenophenylglycin and the arylar sonates (soamin, etc.). The treatment of many of the plasmodial diseases with these compounds has been most satisfactory, but all have been more or less destructive to vision, with the probable exception of

cacodyl. Of atoxyl it may be said that blindness due to optic atrophy has been such a constant sequel following repeated doses that the drug has been practically abandoned. We hope that "606" will not be followed by such an unfortunate complication. It has not been used over a sufficient period to give us any clue as to its probable effect, for the atrophic process from organic arsenical poisoning extends over a period of from several months to a year or more; but it is reassuring in this connection to remember that the dose of "606" is just one massive "dosis sterilisans," and that atrophy of the optic nerve has usually followed repeated injections of small amounts of similar drugs.

The writer has seen several cases injected with "606," always with fairly satisfactory results, though the pain at the site of the injection is often terrific and lasts from two to four days. The drug seems to coagulate the tissues. In one case of tertiary syphilis we cannot say that its use was a benefit, but in the other few cases the clinical evidences of the disease rapidly disappeared.

In view of the fact that several deaths have occurred (and we are reliably informed that some deaths have occurred which have not been reported) and with due regard to the fact that blindness has been a fairly constant accompaniment of the use of other organic arsenic compounds, we should withhold judgment of the value of this newer preparation, and continue to depend on the intelligent administration of known forms of treatment until we are satisfied that there are to be no disastrous by-effects. We should not hesitate to use this or any of the organic arsenic preparations in malignant syphilis; in fact, from what we have so far seen and read we should urge its use in these cases.

In our hands sodium cacodylate in large doses has been effective where mercury has failed, and if the newer drug proves of no more benefit than this it will be a great addition to our therapy. But in the meantime we should remember that Schild, Neisser and others reported most flatteringly some years ago on the advantages of atoxyl; that in 1902 Koch cured sleeping-sickness with it; but the development of blindness in one case out of less than each 100 treated caused a

cessation of its use; and blindness has followed the use of every one of the organic arsenic preparations, with the possible exception of the non-oxygen-bearing compound cacodyl (tetramethyl-arsen.)—*Jour. M. S. M. A. Editorial.*

RELATION OF ALCOHOLICS TO MENTAL DISEASE.—Dr. Geo. W. Webster, President of the Illinois State Board of Health says: "It is estimated that 20 per cent of the insane owe their insanity directly or indirectly to alcohol."

As there are probably 150,000 insane persons in public hospitals in the United States there are consequently on this basis 30,000 insane persons in our hospitals throughout the country cared for at public expense, whose disease is traceable to alcoholics.

Drs. Mitchell and Cotton have made studies covering a period of several years at the Danvers State Hospital. Mitchell found that out of a series of male cases numbering 1129, 13.1 per cent were insane from the direct effects of alcoholics.

For the years 1903-1906 Cotton found that for both sexes the number of cases of insanity due to alcoholics was from 12.6% to 15%.

Dr. A. R. Diefendorf found that in 2000 consecutive cases admitted to the Connecticut State Hospital 11.9% owed their mental disease to alcohol.

Of the commitments to the State Hospital for the Insane at Howard, R. I. for the years 1908 and 1909, a total of 706 cases, in 11.3% alcohol was the direct cause of the mental manifestations.

Peterson believes alcohol to be the cause of insanity in from 18% to 20% of the cases of mental disease.

When we come to consider the indirect effects of alcohol, its influence as a contributing cause of mental disease and its baneful effects upon off-spring, the charge against it as a factor in producing physical and mental degeneration is augmented.

As an example we will cite one case from Dr. Aiken: "A husband and wife had six children; the first three were healthy and developed into sound physical and mental young manhood and womanhood. The next three were much below the

physical and mental standard. Decadence in the life of the parents did not explain this for neither had passed the meridian of life and both were quite robust. Investigation showed that the father, a total abstainer from alcoholics till after the birth of his third child, began to use liquor."

There is a large mass of facts to show that the progeny of habitual drinkers suffer in great measure from the effects of alcoholism in parents. Imbecility and epilepsy are largely due to inherited defects brought about through alcoholics and many cases of degenerative insanity also come about through a vicious inheritance induced by alcoholics.

The dangers arising even from what most persons would regard as moderate drinking are becoming much better understood, since a large body of scientific investigators have been giving their attention to the subject and our evidence upon the degenerative influence of alcoholics and upon the cost to the state and nation which the use of alcoholics entails is accumulating.—*Supt. Harrington's Report, Howard, Rhode Island State Hospital for Insane.*

THE USE OF SALVARSAN.—By Thomas B. Leonard, M. D., Richmond, Va.—One is struck in reading the literature that reports are so conflicting regarding the new drug for syphilis, 606.

There are so many methods of preparing the remedy we can scarcely count them, and as the effect of this drug, above all others, depends upon its correct preparation, it is no wonder that results are variable. It is impossible that all these different modes of preparation would produce the same delicate suspension necessary for it to act properly.

Having used all the different methods sufficiently often to draw accurate conclusions, I can say that any method which does not leave the finished product alkaline is comparatively worthless. * * * Directions given with the commercial package of salvarsan, especially in regard to the suspension for intramuscular injection, have long been obsolete. Dr. Ehrlich himself now uses an alkaline, in preference to the neutral suspension. * * * In neutral suspension the dose is only slightly painful, so that many men continued to use it,

in direct opposition to Ehrlich's directions. Some of these very men are writing articles calculated to bring the remedy into disrepute.

My own experience with the drug has been entirely satisfactory; all of my imperfect results being easily accounted for by some mistake in technique. These have been very few, however, and cases have responded beautifully to a second dose without exception.

In conclusion, I do not want to be understood as saying that the remedy is the longed-for "therapia sterilizans magna."

* * * In comparison with cacodylate of sodium, or mercury, for example, arsenobenzol is far superior to either, or both.—*Va. Med. Semi-Mon.*

IODIDES IN HIGH BLOOD PRESSURE.—*The Hospital* editorially presents the following synopsis from the *Edinburgh Medical Journal* on this subject.—A most useful and practical research by Dr. Matthew into the effect of iodides in reducing high blood-pressure and into the comparative values of various organic iodine compounds which are extensively advertised as proprietary products by various enterprising Continental and American firms of manufacturing druggists. The author begins by recounting the unsatisfactory results following the use of nitrites, benzoates, hippurates, diuretics, thyroid extract, mercurials, Truneck's serum and other reputed remedies for hypertension: all these he tried without permanent benefit, except that mercurials sometimes did good by removing the source of an intestinal toxæmia. The rationale of the undoubted effect of iodides in reducing blood pressure has been much debated. Romberg, and afterwards Muller, thought it to be solely due to diminished viscosity of the blood. Huchard ascribed it to vaso-dilatation; Janeway, to an action on the vessel walls. Rolleston holds that the effect is indirect, and due to a stimulation of the internal secretion of the thyroid gland. The author concludes that iodides have a specific action in cases of high blood-pressure before arterio-sclerosis has set in, but that they have no effect when once the latter condition is well established. The vaso-dilatation is, he thinks, exactly similar in kind to that of nitrites, but slower in onset and much

more prolonged. This action of the iodides is useful in the earlier stages of chronic nephritis, for so-called idiopathic high blood-pressure, and for aneurism.

THIOSINAMINE IN SENILITY. By A. D. Hard, M. D., Marshall, Minn.—Let us select from our armamentarium of effective remedies something which will stay the tendency to loss of elasticity in the arterial walls. If we can do this, may we not expect to retard the processes of decline which seems to be of a fundamental nature? Among chemicals which have peculiar effects upon human tissues by interstitial action, Thiosinamine has been proven to act as a resolvent of indurated flesh. Whether it acts by changing back into normal cells those which have stepped down from active to simple connective cells, we know not. It may be that it stimulates the deposit of original cells in increasing numbers, where the supply was short; or it may increase the natural life energy of existing cells, preventing degeneracy in those which otherwise would rapidly succumb to debilitating influences; or it may act indirectly, in decreasing the burden of duty devolving upon the already located cells. However it may act, we are justified in its use for the purpose indicated, and I suggest that Thiosinamine be given in one-tenth grain doses three times a day for the purpose of staying the hand of Time, and keeping a man from "growing old."—*Med. Times*.

THE EARLY USE OF GALVANISM IN POLIOMYELITIS.—By Tom A. Williams, M. D., C. M., Wash., D. C., Corresp. M. Paris Neurologic Soc., etc.

On grounds derived from the experimental physiology of muscle and nerve, I have advocated the employment of galvanism in the treatment of acute poliomyelitis as soon as the febrile symptoms subside. On the ground that electricity was an irritant to inflamed structures, the text book had discountenanced its use before the lapse of some months. The fallacy of this reasoning was evidently not generally detected, or we should not have heard pediatricians forbidding the use of galvanism at the very time when it is in reality most required. I refer to the period of secondary degeneration of

motor nerves caused by the infiltration of their trophic centers, the anterior horn of the spinal cord. This period of about ten days is rapidly followed, and indeed overlapped, by the degeneration of the muscle fibres. Now as the main function of galvanism is to directly excite contractility of muscle by which it maintains its life, it should be evident that application should be made before the muscle fibres begin to die, that is within ten days of onset. This consideration is corroborated by cases where nerves have been divided, in which muscles without nerve supply can be kept alive for months by periodic galvanization until the nerve has been united and grown.

So far from galvanism proving irritating to the patient, it has a most soothing effect by mitigating the distress and pain caused by the dragging of the joints permitted by the atonic muscles.

As to the employment of other electrical modalities for a trophic effect, I cannot speak; although many careful observers believe in their efficacy.

As to massage, we know that it is quite impossible to maintain by this means the life of a muscle of which the neurone has been destroyed.

If I heard Dr. Tucker correctly, I cannot reconcile his statement that he used a current between 15-20 milliamperes with the further statement that he did not give pain in using the current. I find that pain generally occurs with about 10 milliamperes.—*Before Tristate Medical Society, Feb., 1910.*

The constant galvanic current through wet sponge electrodes may be applied with benefit sometimes in any stage of poliomyelitis. We have a record of a few cures under its use with other treatment. Two cases many years back, the patients subsequently reaching a healthy maturity without deformity, one married and bearing healthy children.

But we have no similar record for the past decade possibly because of taking less time and assiduous pains with the cases and possibly because of later greater gravity and the epidemic form recently prevailing. Besides our cases of this disease have of late come to us fewer in number in more chronic form. The only recoveries we recall taking place under our medical ministrations were cases from well to do families brought

to us in the very beginning of the malady. Results at the college and hospital clinics were never satisfactory.—EDITOR.

PSYCHIATRY.

ABSTRACT OF PAPERS READ AT THE CARDIFF MEETING OF THE MEDICO-PSYCHOLOGICAL ASSOCIATION OF GREAT BRITAIN AND IRELAND, 23rd February, 1911.

The Wassermann Reaction in Mental Disorders. By Drs. H. A. Scholberg and Edwin Goodall.

(1) The work of Bordet and Gengou on complement fixation, and its application to syphilis by Wassermann, are touched upon.

(2) Brief survey of salient statements from the literature since 1906 respecting the Wassermann reaction in general paralysis and other kinds of mental disorder. The published paper dealing fully therewith.

(3) The results obtained by the present writers in general paralysis and in various kinds of mental disorder are given in tabular form, with summaries. Controls from syphilitic, non-mental cases were similarly treated for comparison, as also results obtained by dilution and concentration of the human amboceptor with tables thrown on the screen.

Statements from the literature criticised in the light of the present writers' experience; such points as frequency of the reaction in serum and liquor cerebro-spinalis, its variability in individual cases.

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EDITORIAL.

[All Unsigned Editorials are written by the Editor.]

LEGAL SENTENCE OF OPTIONAL POISONING.—In Nevada a condemned first degree murderer may select one of several methods of self-poisoning in lieu of hanging. Among the poisons he is allowed to select for self-administration is hydrocyanic acid with the information conveyed with the death potion given him, that a drop of this drug put on the tongue will kill instantly. Yet a man is now under life sentence in Missouri for poisoning another by administering hydrocyanic acid which took an entire day to kill and then produced no characteristic cyanide symptoms but only a convulsion like that of senile apoplexy and twelve hour lasting coma. The man adjudged as so poisoned by an intelligent Missouri jury was 82 years old. The Supreme Court reversed and remanded this case.

DOCTOR D. K. PEARSONS, NONAGENARIAN PHILANTHROPIST, promoter of education, has given away to date, millions of dollars to worthy causes, chiefly to education and missions.

His educational benefactions have been bestowed mostly on the worthy smaller colleges of the country and herein is where his gifts to education have differed from the bestowals of a number of others among our multi-millionire benefactors of education. "He hath lent strength to the weak," while others have helped the strong not to stand alone, but to stand higher and stronger.

Dr. Pearsons "owed the world," he said, "six millions of dollars." He has paid his self estimated debt of charity, even selling his homestead to do it, though he has prudently reserved a little for maintenance for the remaining remnant of his life, which, we hope will pass the century mark in satisfied contemplation of a work well done, a life well spent and in hearing the plaudits of a grateful people and an approving conscience.

His life example will be his memorial even though no other monument should be erected to his worthy memory. His name will be "ever memorable" not because of his "golden remains," but because of his heart's warm beating so long and brain so long and truly impulsed for humanity.

THAT PELLAGRA AS AN AMERICAN DISEASE is identical with Italian pellagra was recognized and described in the summer of 1908 independently by J. J. Watson and J. W. Bancock, of Columbia, S. C., who went to Italy to study the disease. In the spring of 1908 pellagra began to be recognized quite generally throughout the south.

Following reports made by Passed Assistant Surgeon C. H. Lavinder from Wilmington, N. C. in the fall of 1908, the importance of the disease was at once recognized by Surgeon General Walter Wyman, of the U. S. P. H. and M. H. Service, who said: "These reports indicate that the disease is more prevalent than has been supposed and that it may in the future assume importance from public health and economic standpoints and should receive most careful study."

Special attention was given to pellagra in 1908 by medical organizations in North Carolina, South Carolina and Georgia, as well as other states.

The South Carolina state board of health held a conference

on pellagra in October, 1908 and in November, 1909, a National Conference on Pellagra was held in Columbia under the auspices of the same board.

An epidemic of pellagra occurred at Mt. Vernon, Alabama, asylum for negroes in 1906. These cases were studied by Geo. H. Searcy and E. L. McCafferty of the hospital staff, with the assistance of E. D. Bondurant of Montgomery and Isadore Dyer of New Orleans. The outbreak was reported by George H. Searcy in 1907. About December, 1907, the diagnosis of pellagra was independently made by the officers of the State Hospital for the Insane at Columbia, S. C. and a careful report rendered to the State Board of Health.

A case of pellagra was reported in 1864, by Dr. John P. Gray, of Utica, N. Y. In the discussion of this case a similar one was cited by Dr. Tyler of Somerville, Mass. Both of these cases were insane. In passing, mention should be made of an epidemic of a pellagra like condition at the Halifax, Nova Scotia, asylum, which was reported by Dr. J. De Wolff as occurring 1863. It is claimed by Dr. W. J. W. Kerr of Corsicana, Texas, that pellagra was rife with the Union soldiers at the Andersonville, Ga. prison about the same time. Dr. H. N. Sloan asserts that pellagra was diagnosed in the South Carolina Asylum at Columbia in the early 70s.

In 1902 Dr. Sherwell reported another case and Dr. H. F. Harris, of Atlanta, recorded a case of anchylostomiasis presenting all the typical symptoms of pellagra.

The reader will find Lavinder's and Babcock's translation of Marie's Lombroso on Pellagra, from which these excerpts are taken, exceedingly interesting reading.

ABUSES OF ASYLUM PATIENTS are comparatively rare, not so rare in asylum as at home, by rough handling and en route to the asylum. Sometimes an ignorant and brutal person gets a position as attendant and punishes these unfortunates who appear obstinate to the green attendant, when they are only deluded. But under the regulations such attendants do not stay long in asylum service, for kindness is the rule and rough handling the exception in all rightly managed hospitals for the insane.

One of the difficulties in reaching the truth as to abuse is the matter of testimony of the insane themselves who will often tell groundless blood curdling stories as to bad treatment.

The same patient who proposed to discharge the superintendent of a certain asylum for the insane which the patient considered was his property, who told me in all seriousness, that a steamboat had passed under the building the preceding night, could talk in an apparently rational manner, as when he said to a predecessor in the beginning of this country's civil war, the whole country's gone crazy and there is no use in keeping a few lunatics like him confined and claimed the right therefore, to be let out with the rest of the people.

There is not much chance for scandal as to illicit sexual commerce with female patients in asylums for the insane, because the sexes are separated widely in different parts of the building, separate buildings usually with female attendants and female night watches for the feminine insane and, vice versa, males for males.

ENCIENTE IN HOSPITALS FOR THE INSANE.—It sometimes happens that enciente women before and during utero-gestation as well as after childbirth, become insane. They must then go through accouchement there, if too violent or otherwise too difficult to be taken care of at home, or if the family or natural guardian be too impoverished to pay for adequate home care and treatment.

Women patients, married or single, who are allowed to go home on leave of absence sometimes become enciente out of the asylum and can not be sent away because of their mental malady. The furlough is at fault for this and ought not to be extended to female patients till fully convalescent, or before the menopause is established, nor to lusty virile male patients either. The Jukes family *et sequellae* should be remembered.

Here is a good argument for vasectomy and oophorectomy concerning personal liberty. Better take away procreative power than give liberty to breed lunacy. For most of the harmless, incurable insane, freedom and asexualization or restraint without it.

PRESIDENT TAFT COMPLIMENTS THE MEDICAL PROFESSION.—On Feb. 18th, President Taft addressed a committee

from the Philadelphia Medical Club thus: "If nothing else justified the Spanish-American War," said the President, "the discoveries of the American physicians since that time in the tropics were ample to justify the expenses of that war ten times over. It remained for American physicians, and especially the physicians in the army, to discover more things there in the ten years since the war than were discovered in the whole two centuries before that time."

This is a well merited tribute, but the President is a little off on the merit question as his predecessor was on race suicide. For did not Edward Jenner give the world vaccinia and Oliver Wendell Holmes immunity from puerperal sepsis, Benjamin Rush the disease view of inebriety, Koch the tuberculosis bacillus? And have we not the serum remedies, the Alexins and Pinel's broken chains for the lunatic, Morton's ether, etc., etc., etc.? But some day all the people, under the benign influence of Burrell's medical publicity and Harvard's free public medical lectures, will know what true medicine has done for humanity's welfare. The fads will fade and quackery vanish under the advancing light of remedially and preventively applied science. "There's a good time coming" brethren "wait a little longer."

IGNORANCE OF NEUROTOXICOLOGY IN COURT.—The medical profession has suffered in public estimation by erroneous neurotoxicological testimony in some recent medico-legal cases in this vicinity. One case, the Doxey trial, being in St. Louis, the other, the Hyde case, in Kansas City. In the one case the caccodylate of soda administered on the prescription of the physician on one of the accused wife's husbands, she supposed to be living in adultery with another.

This woman was saved by the experimental testimony of Professor Gradwohl, of Barnes Medical College, demonstrating the harmlessness of the prescription on dogs before the jury and the court and destroying the effect of the other physician's testimony.

In the other case, viz.: Dr. Hyde's, it was testified most erroneously that hydrocyanic acid was never given medicinally in any form and that a fatal result had followed its con-

jectural administration to an old man past his 82nd year, who had complete aortic sclerosis and suprarenal capsule disease and other infirmities and died after a convulsion had passed into coma and the coma lasting an entire day! Other poisons were alleged to have been given, including strychnia and typhoid fever germs. The Supreme Court very justly reversed the verdict in this case after a year's confinement of the unfortunate physician.

This man ought to have been saved on right neurotoxicological testimony as we have said heretofore in the *A. & N.* The dying symptoms did not support the verdict.

THE SOLIDARITY OF SCIENTIFIC MEDICINE in the United States, much wished for through the growth of the A. M. A., can only be accomplished by getting into its ranks all reputable regular physicians whether they belong to state or county or district medical societies or independent clubs and other societies of medical men in good standing.

Good medical men, for good reasons, may or may not wish to be identified with certain politically or unscientifically run local city or state or county societies or bad men from wrong motives may keep good men out of local county, or city societies and thus under the present rules, keep them out of the state societies and to be out of the state societies or to be in them and out of the ruling ring, in some states and cities is to be ineligible as a delegate to the A. M. A. This is unjust, impolitic and tyrannic and all tyranny is out of place in this country. Anything undemocratic will militate against the greatest usefulness and influence of the A. M. A. and weaken and impair the welfare of the interests of American medicine. The A. M. A. should be fully representative of the entire regular medical profession. Its administration should be always democratic and wield the full power of the entire profession for a state department of medicine, and a physician in the cabinet of the President and other benefits.

COMMITTEE OF THE AMERICAN NEUROLOGICAL ASSOCIATION ON MENTAL DISEASE OF TRANSPORTATION COMPANY'S

EMPLOYEES MEETING in Washington, May, 1910. Abstract and Conclusion:

As a result of these investigations it concludes:

A considerable number of cases of general paresis and other forms of mental disease are to be found among railway employees.

"1. Out of 5,852 commitments to hospitals 60 were of railway employees (over 1 per cent). 2. Out of 1,905 male paretics seen in city clinics 40 were railway employees (nearly 4 per cent). 3. Out of 2,083 paretics at present in hospitals for the insane, 102 were railway employees (nearly 5 per cent). 4. The examining physician for two railway companies has noted in four years, among the employees of these companies 26 cases of mental disease, 15 of which were cases of paresis.

The committee did not discover any fatal accidents due to the mental incompetence of such employees, but learned of several accidents, unattended with loss of life, due to this cause, and several cases in which accidents have been narrowly averted. It is obvious that it is a source of danger to the community to keep persons suffering from paresis and other mental diseases in responsible positions in the railway or marine service. Such danger can be averted or, at least, diminished by the examination, at repeated and regular intervals, of all employees holding responsible positions.

PHILIP COOMBES KNAPP, Chairman Committee."

Is it not significant that this investigation, instead of being made by the several companies and by them paid for should be a voluntary charity in behalf of the welfare of the people, by the medical profession?

This entire report is interesting. It would be much more so and more instructive if conditions of epileptoid and accidents following it had been inquired into. Neurology and psychiatry are quite as important to railway safety service as ophthalmology and freedom from color blindness.

An interesting occurrence in connection with a railway employe later sent to the Eastern Maine Hospital follows:

"Conductor of train suffering from paresis took his entire crew, in disobedience to orders, to a hotel where they secured dinner and then returned to their train. This procedure in-

terfered with running time of trains. Two months later he lost his position with the railroad because he forgot to put out rear-end signals, the omission nearly causing a wreck."

THE BROADER MEDICAL EDUCATION is illustrated, as planned in a summer course by the Tulane University of New Orleans, La. for teachers and other seniors and young graduates. Included in the summer course curriculum the following is especially adapted to advanced students and physicians aspiring to become broader in knowledge essential to a rightly educated up-to-date doctor of medicine:

General Education, Child Psychology, Pedagogy of Exceptional Children, Ancient and Modern Education, Outline Courses in Ancient History and Nineteenth Century American and English History, American Literature, Shakespeare, Poets, French, Spanish, German, Greek, Physics, Mathematics, Astronomy, Chemistry, Drawing, Domestic Art, etc.

This and all other schools should combine a cursory course in biology and microscopy for students to help them as well as pedagogues.

SAVING THE BRAIN AND MIND.—Conservation of mines and forests is just now a subject of political interest, but our health conservation has the highest of all claims upon us. We would conserve and evolve the best types of mind and nervous system for the welfare of humanity and the saving of the nation from decadence, beginning at Castle Garden, the Golden Gate and the gates of matrimony.

THE WEARING OUT OF SHOES AS EVIDENCE OF ON COMING AGE.—A former United States of America Secretary of State, Honorable Leslie M. Shaw, used to say that in his earlier life he wore out six pairs of shoes *per annum*. Then the number successively "worn out" annually as age wore on him, became five, four and three pairs. During the last year he spoke of, (1910,) he had only two pairs of new shoes. I don't walk so heavily, so fast, nor so aggressively as I used to, he said; I have as great ambition and capacity for work as ever; but I know that I am growing old, because my shoes last longer."

FROM A PERSONAL FAMILIARITY with the professional energy, capacity, zeal and college equipment of the Physicians and Surgeons College of Boston, we can not endorse the "Foundation's" strictures of that worthy but not rich, nor university annexed, and not foundation supported college, though it is too sparingly endowed. We saw, however, biological research instruments there self devised by college geniuses in the faculty that reflect credit on its professional and teaching ability and capacity for devising expedients—the kind that makes men and schools great in the long run of right endeavor.

PROPOSITIONS OF THE A. M. A. ASSOCIATION REFORM LEAGUE.—The American Medico-Political Reform League has been incorporated for the purpose of conserving the principles of democracy, fair play, free speech, equal rights and membership government in this national medical society.

INSANE HOMICIDE UNDER BOND TO KEEP THE PEACE.—Associated press news from Easton, Pa., Feb. 7th, announce that Robert B. Bachman, of Nazareth, Pa., a religiously insane "Holy Roller," who sacrificed his little niece in a religious frenzy in 1908, has been given his freedom on the ground of recovery from insanity. A statement to the court by the hospital authorities of Bachman's recovery secured his *release on \$2,000 bond to keep the peace.*

The absurdity of putting an only apparently convalescent religiously delusioned homicide under bond not to have another attack looks strange to an alienist of experience. A paroxysmal insane homicide should be always under surveillance, restraint and suspicion.

Why not bond epileptics to have no recurrence of their fits?

PSYCHOPATH AT LARGE.—Only as late as January first Sir Thomas Lipton was attacked by a lunatic now in the London workhouse asylum for insane. Five days after, near Kansas City, Farmer Wadleigs, supposed to be sane, called his neighbors Mr. and Mrs. Bales to the door that morning and shot both to death without motive.

While striving to extinguish tuberculosis it might be well to guard against the psychopath at large, which like the long unused gun is often dangerous though not supposed to be loaded. The best safe-guard besides sequestration against the insane psychopath is to stop their conjugal propagation.

SUICIDE.—A recent statistical investigation appears to show that suicide is increasing in the United States. The number of persons dying by their own hands in 1909 is estimated as 12,500. In general, there has been a steady increase in the number of cases since 1890.

Figures for certain of the Massachusetts cities in 1909 are as follows: Boston, 124; Springfield, 15; Worcester, 10; Holyoke, 10; Lowell, 18; Lawrence, 9; various smaller cities, 8 or less.—*Bost. Med. and Surg. Jour.*

So much, with probably few exceptions, towards the conservation of racial stability. Suicides often are from racially decaying families.

HEALTH; A MATRIMONIAL ESSENTIAL is the proposition of Dr. Fiegenbaum and State Senator Beall of Illinois, proposed as a law of that state.

This is the beginning of the end of the conjugal multiplication of imbeciles, epileptics, lunatics, tuberculotics, syphilitics, etc., and commencing depletion of hospitals, insane asylums, penal and eleemosynary institutions.

"TO PROMOTE THE COMFORT AND HAPPINESS of the inmates during the coming year" is the reading of a paragraph in a will referring to one of our most worthy hospitals for the insane. And many other hospitals are receiving similar bequests. But we can recall the time and the hospital when and where a manager said "why provide such things as floor rugs at bed sides of the insane—they will not appreciate them" and when a gymnasium and lawn parties were regarded as useless, expensive follies in behalf of those afflicted.

DR. MARIE'S TREATISE ON PELLAGRA.—Translated by Doctors Lavinder and Babcock, the State Company, Columbia,

South Carolina, is an excellent authorized translation which we have received and read with pleasure and profit.

DOCTOR EDWARD GAMALIEL JANEWAY, who died February tenth at his home in Summit, New Jersey, aged seventy years, was one of the best known and appreciated of New York physicians.

He was courteous, competent and charitable in his relations to the profession he adorned, the people who received his ministrations and all his associates. His ability received general professional recognition. He was a skillful diagnostician and the courts recognized him as an alienist of no mean capacity. He was humane, as befits the good physician, and the blessing of many poor and ready to perish were showered upon him that the world knew not of.

MOVING PICTURES FOR THE INSANE patients are being tried by Superintendent Sidney D. Wilgus, of the Elgin, Ill. State Hospital. Other hospitals are adopting them. They ought to prove a valuable addition to the diversion of all hospitals, for the insane and non-insane, for convalescents, like the lectures, magic lantern shows, dances, games, etc., long in vogue in the hospitals for the insane. One of the chief omissions of all hospitals is adequate provision for diversion from the psychic pangs of nostalgia, among convalescents especially. Homesickness is an obstacle with many in the way of recovery. Our insane hospitals set the other hospitals a good example in this regard. Hospital life for the convalescent is usually too monotonous.

WHAT HERBERT SPENCER SAID of modern systems of education in general may be said of Mr. Pritchett's idea of medical education as a great university annex, namely: "They encourage submissive receptivity instead of independent activity."

The medical student spending the vacation third or more of a four years course, with a practicing physician preceptor, going daily clinical rounds with him and getting daily instructions from him between the time of attendance and the college sessions would make a better doctor of medicine at the end of

four years study than by getting two years biological laboratory instruction to the exclusion of this aforetime bedside practicable medical observation and clinical thought without this. Four terms at college are not too long, but it is a mistake to omit the vacation study under a preceptor.

IMPORTANT TYPOGRAPHICAL ERRORS APPEAR in the February number, viz.: Concluding review of the Carnegie Foundation Report the type makes us say "the medical profession is not yet ready to surrender its idols to literary or medical guidance." The last line should read: literary non-medical guidance.

We might have added to that report a statement of the fact that no St. Louis medical school was included among the letters showing the incompleteness of the independent schools condemned, that the writer has no medical college faculty relations and wrote from several decades of teaching experience in three different schools, two of which were commended in this report and from a somewhat intimate familiarity with many of the more than one hundred schools unfavorably considered in this remarkably inaccurate and unjustly disparaging report.

The other error is the caption, page 209, "uninformed police should have read uniformed police."

DIVERSION FOR THE INSANE.—"The value of the various forms of diversion, amusement and manual occupation, especially the latter, has been recognized in the McLean Hospital from its beginnings. In his first published report, in 1822, Dr. Rufus Wyman writes of its value 'to divert the attention from unpleasant subjects of thought and afford exercise both of body and mind.' They 'have a powerful effect in diverting the mind, breaking up wrong associations of ideas and inducing correct habits of thinking as well as acting.' This has been the opinion of all superintendents since his day as it appears in their annual reports, and the hospital accounts show the expenditure of large sums of money for this purpose.

"In 1839 Dr. Luther V. Bell said 'there is probably no institution in the world where the value of this (*i. e.* systematic,

regular employment in useful bodily labor) has been more fully tested than in this.' "

From a report of George T. Tuttle, M. D., Medical Superintendent, Waverly, Mass.

The value of diversion for the insane is now pretty well appreciated and provided for by most American hospitals. After awhile the public will come to know that these sick people require more than mere asylums for detention and restraint, Legislatures and philanthropists will then enlarge their liberality toward them even as they are now doing.

HER EPITAPH.

He said he loved her!
 Then he let her toil,
 Fry, bake and stew, stew, bake and broil,
 Mop, scrub and iron, wash and rake and hoe,
 Sweep leaves in Fall, in Winter shovel snow,
 Bear seven children, sew and darn and mend,
 Care for his parents and to neighbors lend
 Whatever minutes she could find betimes—
 Then when she died he wrote two coupled rhymes
 And on her gravestone had them neatly cut:
 I have them here! They sound all right, but—but—
 "Beloved by me, the woman 'neath this moss
 She was my helpmate, and I mourn her loss!"

—Lurana W. Sheldon.

A good inscription to put over the entrance to the female wards of some of our country lunatic asylums.

THE GOVERNMENT HOSPITAL FOR THE INSANE, Washington, D. C., is described by a Solomon of our day as a model, and herein he displays good judgment and observation like his ancient, wise predecessor.

OVERFLOWING AS THEY DO about reciprocity and annexation, the newspapers of our mother Kingdom and sister Dominion need a sounder logic and a safer psychology in their "think tanks" to check the illogical dripping. The thing to promote the desire for annexation is not reciprocity but higher American tariff. The balance of trade being now so greatly in favor of the United States, Canada is better off separated, with

reciprocity, than annexed with our present high tariff. The London and Kanuk writers should read the *Alienist and Neurologist*. When Canada and the United States become one, the unity will include for all America and all Britain one flag, one people and one destiny and that, though a long way off, may come in time as predicted and wished for by some.

Unless we put a check on the undesirable, mentally unstable and vicious elements coming now and for several years past too freely into our country to become its citizens, the more level-headed, law-abiding Briton will be needed to contribute to the liberty and right-loving stability of the masses that are to make the future government of the United States of America.

NEW INSANE HOSPITAL FOR ARKANSAS to cost two hundred thousand dollars was authorized by the Senate of this state, May second. The grounds will be 500 acres.

HOME AND PENSIONS FOR AGED PHYSICIANS is a suggestion of President Herman E. Pearce of the Missouri State Medical Association, which we recommend even at the risk of having no state medical association journal. Disabled physicians should be likewise cared for and old medical institution doctors of the state should be pensioned.

A home for indigent and disabled members of the A. M. A. would also be a grander monument to our good fellowship and philanthropy than the journal. A Biological Experimental Institute and Hospital might also be established and conducted in connection with such a home, one in each state, and one at the home of the Journal of the A. M. A.

Neither the States' nor National societies need more than a published roster of membership and official proceedings. Society incomes could be made to do more good if spent on institutions for post-graduate medical enlightenment, like laboratories, libraries and museums, than on association medical magazines. Private capital and medical pride would sustain medical publications enough, even as they are now doing, for all the needs of the profession. Let us broaden the usefulness to ourselves and our kind, as well as to the rest of mankind, as we go on in our good work for the welfare of the world.

IN MEMORIAM.

DR. ALBERT S. ASHMEAD.—*The Medical Fortnightly* anticipates us in the following just tribute to the cultivated contributor to the *Alienist and Neurologist* and to *Fortnightly*, the *Journal of Dermatology* and others of the meritorious medical periodicals of the United States.

"Few medical names are more familiar to the American profession than is that of Albert S. Ashmead, who, during the sixty years of his life, was a man with ideas and a gift of expressing them. His numerous scholarly contributions to the medical press introduced him to medical readers not only of America but the world over, and general sorrow comes to us all in the announcement of his death, which occurred at Philadelphia on February 20th. During the earlier years of his medical career Dr. Ashmead served in a professional capacity the government of Japan, and through this connection he gained a knowledge of leprosy and certain of the tropical diseases which marked him an authority. His greatest work was done in this connection, though his articles on Prehistoric Syphilis will go down to future ages. We have considered it a privilege to count him among the contributors to the *Fortnightly*," and so say we for the *A. & N.*

DR. WILLIAM WARREN POTTER DEAD.—The death of this genial friend and editorial co-laborer is also chronicled in the *Fortnightly Monthly* and weekly *Medical Journal* as having died at his Buffalo home and the home of the *Medical Magazine* he so long and ably edited, on March 14th, 1911, at the age of 72 years.

DR. WARREN B. OUTTEN.—And now we have to sadly chronicle the death of another friend in the profession—this time the friend of our youth and until now—Dr. Warren B.

Outten, the long time surgeon and railway surgery organizer. Dr. Warren B. Outten of the Missouri Pacific System was a surgeon of recognized and demonstrated ability, a medical writer of merit and a man of friendship, fortitude and fidelity.

An appreciative obituary of our dead friend appears in the April 10th *Fortnightly*.

Dr. Outten was honored with the Presidency of the American Association of Railway Surgeons, St. Louis Medical Society and held honorable membership in many worthy medical bodies.

With those near in ties of blood we mourn and sympathize. In his life time he did good and faithful work—to his honor and the welfare of mankind. But it is finished.

REVIEWS, BOOK NOTICES, REPRINTS, ETC.

HABIT-FORMING AGENTS: THEIR INDISCRIMINATE SALE AND USE A MENACE TO THE PUBLIC WELFARE. By L. F. Kebler, Chief, Division of Drugs, Bureau of Chemistry. U. S. Department of Agriculture, Farmers' Bulletin 393. Issued April 29, 1910.

DRUG-ADDICTION (QUACK) TREATMENTS.

"With the exploiting and advertising of medicines containing habit-forming agents it is but natural to expect that drug addiction would result. It is only surprising that the number of cases is not greater. The reasons for this probably are, first, that the average individual is horrified to think of becoming a drug addict; second, the secret of many of the habitues dies with them; and, third, the most common cases, i. e., those using cocain, morphin, and opium, are short-lived, most of them dying within ten years after contracting the habit. The craving for the drug, with rare exception, can not be controlled or overcome as long as the drug is obtainable.

"There are at present "mail order express treatments" for all kinds of drug addiction. All correspondence and transactions take place through the mails except the sending of the "dope" itself. It is usually represented by the exploiter that the habit can be successfully treated at home, by the particular treatment he is interested in, and its composition is a profound secret, known to him alone. As a rule, these treatments are composed of well-known drugs. In most instances they contain the very drug or drugs for which the treatment is advertised and sold. For example, one physician furnished a treatment to a supposed morphin addict containing, according to his own statement, 22 grains of morphin to the fluid ounce, and in addition 4 minims of fluid extract of cannabis indica in the same amount.

"Another "doctor" supplied a mixture containing on the average 14.2 grains of morphin sulphate to the ounce. A package sent out by the James Sanitarium for the treatment of a supposed morphin addict contains 24 grains of morphin to the fluid ounce. A treatment of Habitina, supplied by the Delta Chemical Company, according to the label on package, contains 16 grains of morphin sulphate and 8 grains of diacetyl morphin (the chemical name for heroin, a derivative of morphin) to the fluid ounce. An interesting practice in vogue is the sending of a supply consisting of a number of bottles marked from 1 to 18 inclusive, or whatever number there may be. In one instance, for example, 10 bottles were delivered marked "first supply," numbered from 1 to 10, inclusive, and every one bore the same inscription, namely, "Dionin 2 2-3 gr., morphin 4 gr. per fluid ounce." Each bottle held about 4 ounces of fluid, which means that it contained 16 grains of morphin and about 10 grains of dionin, a morphin derivative.

"There are at present at least thirty of these treatments sold throughout the United States. They are sent indiscriminately into any home, although some of them contain sufficient poison to kill a dozen men, and in only one instance has the writer observed a statement of warning relative to their poisonous character. Some of the promoters themselves have little knowledge of the dangerous character of the mixtures they are handling. For example, it was found that one of these treatments, handled by a groceryman who had neither medical nor pharmaceutical knowledge, was distributed to any one asking for it. In some instances these men organized into firms or corporations and employed doctors to assist them in their nefarious business. The chief reason for employing a physician in this connection is to evade the various state laws, because a business of this character would probably be construed as practicing medicine, and such practice is denied to persons not legally qualified as medical practitioners. These physicians very well understand that there are at present no substances known to the medical profession which can be used successfully in the treatment of drug addicts without the careful supervision and restraining influence of the medical

man himself and the constant attendance of a nurse acquainted with drug-addiction cases. It is well known that the drug addict is incapable of treating himself. The chief object of this practice seems to be to extract money from the unfortunate victims, who in many instances continue the treatment over a period of years.

"In other instances the gradual reduction treatment is resorted to, but the reduction is very gradual, being in some instances at the outset 1 grain per month, when as much as 12 grains were used at the time the treatment was begun. In other cases no attention is paid to the progress of the patient, and if a second or third supply is ordered it is sent without question as long as the price is paid. This feature was clearly demonstrated by ordering from various institutions and individuals their various treatments; after a lapse of time, without giving any information as to the progress of the case, the second treatment was shipped without question or inquiry as to the patient's condition. Furthermore, in some instances the amount of opium or morphin present in the second supply is even greater than that present in the first.

"Another very interesting feature brought out in connection with this business is the fact that the demand for the treatment is greater in States having stringent antinarcotic laws; for example, the laws of Texas or California or of the District of Columbia, Virginia, etc., relative to the sale or disposition of opium, cocain, and morphin, or preparations containing the same, are rather stringent and rigorously enforced, with the result that the demand for these drug treatments is greater in these jurisdictions than in certain other sections of the United States. In some instances even physicians evolve and operate the schemes. Some state laws contain a clause making it illegal for a physician to prescribe indiscriminately to habitues, but in cases of the character under consideration, where most of the material is shipped out of the State, little attention is paid to the business by the local authorities. It is obvious that unscrupulous physicians are the prime transgressors in fostering the perpetuation of these fraudulent so-called drug-habit cures.

"There are various remedies on the market used from in-

fancy to old age containing habit-forming agents which can be purchased almost *ad libitum* by anyone. Many of the mixtures are concocted, directly or indirectly, through the aid of unscrupulous physicians, so called. Some illicit sales of cocain, morphin, etc., are also made by druggists, both wholesale and retail. A few physicians take advantage of the authority intrusted to them for the proper using of these habit-forming agents and prescribe for all requesting them, regardless of the health and welfare of the public. Physicians often are not circumspect enough in the writing and safeguarding of prescriptions containing these drugs. With these conditions obtaining, drug addiction has become a great evil, and the question naturally arises, How can it be minimized or eradicated? There is a great diversity of opinion on this point, but the following are the lines along which results can be expected:

"First. Educate the public through the press and by pamphlets, lectures, etc.

"Second. Enact laws forbidding the sale of all pernicious habit-forming drugs, such as cocain, morphin, heroin, etc., and their derivatives and preparations, at retail, except on prescriptions of physicians, dentists, or veterinarians.

"Third. Require a permanent record to be kept, subject to state and federal inspection at all times, of all transactions in such drugs, whether wholesale, retail, or through the use of prescriptions.

"Fourth. Enact laws forbidding the handling of any of these products except by manufacturers, wholesale and retail druggists, and others legally qualified.

"Fifth. The state boards of health, or other governing bodies, should be empowered to withdraw the licenses of physicians who prescribe or druggists who sell these articles for other than legitimate medicinal purposes.

"Sixth. A federal law should be enacted forbidding the shipment in interstate commerce of habit-forming drugs or preparations containing them, except through the customary channels of trade, and then only when complete records of all transactions are kept."

Not only are unscrupulous physicians to blame in dis-

seminating these patent perdition promoters among the confiding, unfortunate drug habitues, but unconscionable pharmacists also and ignorant, egotistical clergymen and the daily press, too often.

And it is not generally known too that most of the deceptive habit cure advertised drugs and quack remedies for other conditions are not put up or on the market by physicians, but by drug clerks and other subordinates once in drug stores on small salaries now risen to millionaires on popular gullibility. Also ignorant, conceited people generally, to whom a little knowledge is a dangerous thing. Then there is the lying certifier and the unprincipled promoter to whom human life is nothing and money making everything.

LAPAGE'S FEEBLE-MINDEDNESS IN CHILDREN. Among the Manchester Publications comes a copy of Lapage's Feeble-mindedness in Children of School Age. Longmans, Green & Co., are the well known publishers. Books like this are securing more attention than heretofore and this book is one among the best of its kind. Its author writes by authority of expert knowledge of his subject. We cordially commend it. Price, \$1.60 net.

This book, as the author states in his preface, has been prepared as especially "suitable for school, medical officers and also for teachers or social workers who have to deal with feeble-minded children."

"The further objects of this book are to emphasize the importance of the subject of mental deficiency and of the prominent place that efficient care of feeble-minded persons should take in the measures for the welfare of the community and to point out that feeble-mindedness is an inherited taint handed on from generation to generation, and that every feeble-minded person, who is a free and unrestrained agent, may, by becoming a parent, transmit that taint and to demonstrate that the only way to deal effectively with the problem is to provide suitable supervision and care, which will last during the whole lifetime of the feeble-minded individual, and to show how such care may best be administered." The author thanks Miss Dendy for her help and advice, and for the material

which she has placed at his disposal declaring that her appendix of the Treatment and Training of Feeble-minded Children adds immensely to the practical value of the book; also Professor Lorrain Smith for his help, and Dr. J. McIlraith (Medical Officer to the Sandlebridge Colony), Mr. Wyatt (Director of Elementary Education in Manchester), and Miss Dickens, (Superintendent of the Manchester Special Schools), for so kindly placing material at his disposal; Mr. Quinn and G. Lapage have also given him much assistance with the proofs.

The book is appropriately dedicated to the memory of philanthropist Henry Ashby. The illustrations show the feeble-minded variously employed. The discussion of brain and mind relations are lucid, practical and up-to-date.

Messrs. Longmans, Green & Co. have been appointed agents for the sale of the publications of the University of Manchester in the United States. They are now prepared to supply orders. A list of the publications, with currency prices, will be sent to any address upon request.

Address, Fourth Ave. and 30th St., New York.

WHY SHOULD ANYONE GO INSANE? SOME FACTS AS TO THE EXTENT, CAUSES AND PREVENTION OF INSANITY. Pamphlet no. 121. State Charities Aid Association. 105 East 22nd St., New York City. By Homer Folks and Everett S. Elwood.

The object of this leaflet is to state briefly what is now known as to the causes of insanity, facts now known to very few other physicians; they should be known by everybody. If known, this brochure states, they will be acted upon.

Therein we think the state charities association which sends abroad this pamphlet are somewhat in error. Take that prominent cause, alcoholic indulgence, and those other great causes, venereal disease, venereal excess and matrimonial infelicity for example, and how few comparatively avoid them who might, yet this paper ought to do good for there be some who will take warning therefrom. Among the strong warnings of this paper is the following:

Immoral Living. One kind of insanity is known popularly as "softening of the brain." It is known scientifically

as general paralysis, or paresis. It is incurable by any means now known to the medical profession. Those afflicted with it suffer gradual mental and physical decay. The very substance of the brain becomes changed. They usually live but a few years. It is now agreed by the medical profession that this disease is caused by an earlier disease known as syphilis. Syphilis is a germ disease. It is usually the result of immoral habits, though one may get it innocently. Every man and boy should know that by yielding to the temptation to go with immoral women he is exposing himself to the probability of getting this disease, which may result, years after, in incurable insanity. Over the door of every immoral resort might truthfully be written "Incurable insanity may be contracted here." If self-respect, the desire for the good opinion of others, the influence of religious training and the attractions of home life are not sufficient to prevent this kind of wrong-doing, the danger of contracting a disease which may result in incurable insanity should be sufficient.

The number of patients having paresis or "softening of the brain" admitted to state hospitals during the year ending September 30th, 1910, it states was 600 men or 17 per cent of all men admitted and 263 women or 8 per cent of the women admitted.

Warnings are given against alcohol and other poisons. Worry and loss of sleep and physical disease are properly mentioned, bad mental habits, heredity, etc. The reader is reminded in the words of Shakespeare:

"Our remedies oft in ourselves do lie

Which we ascribe to heaven,"

and is also enjoined to refrain from those acts and habits which are liable to result in mental disturbance and to pass the word along. "Help to make these facts generally known," it says.

"If a relative or friend or acquaintance seems to be a victim of bad physical or mental habits or is approaching a mental breakdown, take steps to see that he is given the information you possess and receives expert medical care without delay."

The production has the endorsement of Dana, Peterson, Bernard Sacks, M. Allen Star and others. The State

Charities Aid Association has 5000 members through the state of New York and is doing good work for human welfare.

This valuable contribution to psychiatric light and efforts, informs us that among the agencies treating mental disease in that state that New York maintains 14 well equipped hospitals, whose physicians are highly skilled in the treatment of mental disease; in connection with some of which, dispensaries are conducted by hospital physicians, for the free treatment of persons suffering from mental aberration. The superintendents and physicians of all state hospitals are ready to give advice to all who apply to them. They are also willing to co-operate with family physicians in doing all that can be done for the patient at home.

It is expected that each state hospital will soon employ a physician and a social worker to be known as field workers to visit the homes of the patients in the state hospitals. Advice for the prevention of insanity and assistance in the removal of unhealthy conditions will be given to families where tendencies toward mental disease seem to exist.

The best information here conveyed is that under the law of 1908 any person afflicted with mental disease may be admitted to a State Hospital for treatment by simply signing an agreement that he will not leave without giving five days notice in advance. It is not necessary for individuals suffering from a mild form of mental disease, therefore in that state, to undergo the formalities and delay of a legal commitment.

This valuable effort to prevent insanity will be sent free to anyone who may write for pamphlet 121 promising to rightly place them.

OUTLINES OF PSYCHIATRY. By William A. White, M. D., Washington, D. C. Third Edition. This is the Nervous and Mental Disease Monograph Series No. 1.

The fact that this valuable book has so soon reached the third edition speaks well for its appreciation by the profession. We have nothing to detract from the good opinion expressed of the first volume.

THREE CONTRIBUTIONS TO THE SEXUAL THEORY. By Professor Sigmund Freud, LL.D., Vienna, New York, 1910. Being Nervous and Mental Disease Monograph Series number 7.

Dr. A. N. Brill's Translation of Freud's "Three Contributions to the Sexual Theory," is before us with an enlightening introduction by Dr. J. J. Putnam.

We concur with Dr. Putnam that these essays are timely and concern a subject which is not only important but unpopular. Few physicians read the works of v. Krafft-Ebing, Magnus Hirschfield, Moll and others of that sort. The remarkable volumes of Havelock Ellis were refused publication in his native England. The sentiments which inspired this hostile attitude toward the study of the sexual life are still active, though growing steadily less common. One may easily believe that if the facts which Freud's truth seeking researches forced him to recognize and to publish had not been of an unpopular sort, his rich and abundant contributions to observational psychology, to the significance of dreams, to the etiology and therapeutics of the psycho-neuroses, to the interpretation of mythology, would have won for him, by universal acclaim, the same recognition of all physicians that he has received from a rapidly increasing band of followers and colleagues.

In relation to Bisexuality the author says: "Since the time of Frank Lydston, James G. Kiernan and Chevalier, a new stream of thought has been introduced for the explanation of the possibility of sexual inversion. This contains a new contradiction to the popular belief which assumes that a human being is either a man or a woman. Science shows cases in which the sexual characteristic appears blurred and thus the sexual distinction is difficult, especially on an anatomical basis. The genitals of such persons unite the male and female characteristics (hermaphroditism). In rare cases both the parts of the sexual apparatus are well developed (true hermaphroditism) but usually both are stunted.

"The importance of these abnormalities lies in the fact that they unexpectedly facilitate the understanding of the normal foundation. A certain degree of anatomical hermaphroditism

really belongs to the normal. In no normally formed male or female are traces of the other sex lacking; either these continue functionless as rudimentary organs, or they are transformed for the purpose of assuming other functions.

"The conception which we gather from this long known anatomical fact is the original predisposition to bisexuality, which in the course of development has changed to monosexuality, leaving slight remnants of the stunted sex."

The author thus ends his interesting contribution to a too long overlooked subject in psychopathology.

"The unsatisfactory conclusion which must result from an investigation of the disturbances of sexual life is due to the fact that we as yet know too little concerning the biological processes in which the nature of sexuality consists to form from our isolated examinations a satisfactory theory for the explanation of either the normal or pathological."

Nevertheless he has made many significant revelations concerning sexual life perversions and the neuropathologist cannot ignore them.

The themes of this valuable book, like those of Moll, Krafft-Ebing and others, cannot be avoided by the neurologist and psychiatrist any more than the dissecting room can be omitted in the study of anatomy or the laboratory in investigating biology.

The book deserves a better binding. Good books like good people should be attractively dressed.

DEMENTIA PRAECOX. By Arthur H. Harrington, M. D., Superintendent of the State Hospital for the Insane, Howard, R. I., from the *Providence Medical Journal*.

As to pathology and causes, among other statements, the author says: The pathology of disease has not been determined. Changes have been reported as having been found in the cellular elements of the lower stratum of the grey matter of the cerebral cortex. These changes in this situation have been confirmed by several observers.

There is no doubt but heredity plays a prominent part here. In some instances the affection assumes the characteristics of a family disease. I could cite a large number of in-

stances from our cases at the state hospitals, where fathers and mothers have been patients at the hospital with this disease, and where the offspring have appeared later afflicted with the same. I could cite a large number of cases of brothers and sisters, in some instances including as many as four children in the same family, who have been patients at the hospital, all suffering with dementia præcox.

Congenital mental deficiency is another antecedent. At least 20 per cent of the cases develop on a basis of varying degrees of imbecility.

Again, there is the hypothesis which has been prominently advanced that the disease is due to an intoxication produced by poisons elaborated in the testicles, ovaries and also in other glandular organs, especially the thyroid.

Considerable stress has been laid upon pregnancy and child-birth as a causative factor.

From the study of his cases at the State Hospital the element of alcohol in parents cannot be neglected. He believes from what he has observed that alcoholism in parents in many of his cases has entailed upon offspring a physical and nervous organization which at least makes the subject a prey to the disease.

THE THENAR AND HYPOTHENAR TYPES OF NEURAL ATROPHY OF THE HAND. By J. Ramsay Hunt, M. D., Associate Professor of Neurology in Columbia University, New York. Reprint from the *American Journal of the Medical Sciences*.

The author thus introduces his subject, "The types of neural atrophy of the hand, to which he here directs attention are unaccompanied by sensory disturbances, and for this reason he considers them of especial clinical interest from their rather close resemblance to the early stage of the progressive muscular atrophy, of the Aran-Duchenne type."

The author makes the following concluding comments. "The atrophy is well defined in the thenar region, and at the first glance appears limited to the distribution of the thenar branch of the median nerve. The completeness of the reactions of degeneration, which are confined to the muscles

of the thenar region, are also very suggestive of a neural origin. A more careful scrutiny of the case, however, shows a slight general wasting of the hypothenar, interossei, and along the ulnar side of the forearm, with fibrillations, exaggerated arm reflexes, both tendon and periosteal; so that the muscular atrophy must be interpreted as of spinal origin, an early stage of the Aran-Duchenne type. It is, of course, not impossible that the two conditions, neural and spinal, may be present in combination, as certain occupations requiring excessive use of the hands are recognized etiological factors in both groups of cases. It is certainly singular that atrophy and reactions of degeneration should be so circumscribed to the distribution of the thenar branch in a case of progressive muscular atrophy."

The differentiation the author makes into myelopathic and myopathic and a neural type are worthy of special note. "In addition to the atrophic paralyses of the intrinsic muscles of the hand, of myelopathic and of myopathic origin, I believe that a neural type should be recognized," he says. "Those of neural origin may be separated into two well-defined clinical



Occupation neuritis of the thenar branch of the median nerve, showing a circumscribed atrophy of the right thenar eminence which contains a remnant of muscular tissue showing the reactions of degeneration; the sensations are normal. A scarcely perceptible flattening of the left thenar, with complete reactions of degeneration to the abductor and opponens pollicis is present

types, both due to compression lesion of a motor branch of a mixed nerve. These may be appropriately designated as follows: A hypothenar type, which term indicates the site of

the compression at the base of the hypothenar eminence and its relationship to the ulnar nerve. A thenar type, which also indicates the site of the compression at the base of the thenar eminence and the relationship to the median nerve."

This excellent contribution to the literature of an interesting neuropathic subject is exceptionally well illustrated. The neuro-anatomy is taken from the best anatomy extant, viz.: Testut's.

A BILL TO ESTABLISH A DEPARTMENT OF HEALTH, and for other purposes. By Mr. Owen, April 6, 1911, 62d Congress, 1st Session. Read twice and referred to the Committee on Public Health and National Quarantine.

This bill ought to become a law at once. Such a department is as essential and important to the popular welfare as any of the other departments of state. Devastating plagues from the east may, any day, demand attention on our borders and within the country. Coming in too freely and too perilously, also are neuropathic and psychopathic race degenerates. These are to be looked after as well as ordinary diseased persons. Syphilis, tuberculosis, alcoholism, insanity, idiocy and their sequent damaging entailments on progeny are menacing and perilous to the national stamina of mind and perpetuity of our people and ours is a popular government. If the unfit increase government must suffer in quality. Let us look better than we have in the past to the psychic quality of the mental materials that are needed in the repair and future building extensions of our temple of Liberty. ❧

The Republican and Democratic edifice should be made strong and storm proof, for foul political weather and hurricanes threaten the edifice of state, our fathers builded under great strain of brain and blood treasure. The safety of the treasury of freedom true is in peril of racial decadence.

PELLAGRA. By Dr. A. Marie, Physician to the Asylums, Dept. of the Seine, Editor in Chief Archives de Neurologie and Director of the Laboratory of Pathological Psychology, Ecole des Hautes Etudes, Paris, France.

With introductory notes by Professor Lombroso, author-

ized translation from the French by C. H. Lavinder, M. D., past Assistant Surgeon U. S. Public Health and Marine Hospital Service and J. W. Babcock, M. D., Physician and Superintendent State Hospital for the Insane, Columbia, S. C. With illustrations, biography and appendices. 1910. The State Co., Publishers, Columbia, S. C.

This excellent book might be fitly called an abridged memorial of Lombroso, as it is largely an abridgement of the lamented but immortal Turin Professor's great work *Trattato Profilattico e Clinico della Pella*gra, Turin, 1892, embellished by the genius of Dr. A. Marie, Editor-in-Chief of the Archives de Neurologie and Director of the Laboratory of Pathological Psychology, Ecole des Hautes Etudes, Paris, France and given in English dress to American Profession with Additions, Illustrations, bibliography and appendices by two eminent American medical, Doctors C. H. Lavinder and J. W. Babcock, the former in the Marine Hospital Service, the latter the Superintendent and Physician of the State Hospital for the Insane at Columbia, S. C.

Professor Lombroso's own commendation and preface also adorn the volume. The illustrations and fever charts are particularly instructive, the latter especially as relating to recovery or mortality.

Appendix IV is especially valuable as it gives advice and rules for avoiding pella

gra.

The book maintains that spoiled corn is the cause of pella

gra and advises how to detect the kind of grain that causes it and how to raise non-pellagrous maize.

The references are many and valuable, American authors coming in for a share thereof, our late lamented friend, Dr. James Nevins Hyde, being referred to five times.

The dermatitis illustrations like the "pella

gra glove" Illinois case of Dr. G. A. Zeller and the southern negro pictures are diagnostic. The chapter by the translators is particularly entertaining and instructive. This chapter gives a plate picture of Dr. J. J. Watson's convalescent patient which may be profitably compared with the illustration of the same case in an early stage of the malady on a preceding page.

This book ought to be in the possession of every practicing

physician in the mid-continent and Southern American states and in all contiguous countries where Indian maize is grown. A sanitary proclamation against immature and spoiled corn as food went out from the health authorities of Venice so far back as 1776. "No one" (it said among many other things) "must either for human food or even for food of animals, make use of corn recovered from water when it has thereby become spoiled or of bad odor." It was also "equally forbidden to mix such corn with other (sound) grain for facilitating its sale and so having it consumed either by the inhabitants of the villages themselves or their dependencies."

It thus appears that there was need of a pure food law in those days as there is in ours and that commercial rascals indifferent to the sanitary weal of the people had to be watched in Venice as they now require watching in Columbia.

INSANITY IN EVERY DAY PRACTICE. By E. G. Younger, M. D., Brux. M. R. C. P. Lond. D. P. H., etc. Second edition, revised and enlarged. Chicago Medical Book Co.

This is an interesting and instructive monograph from a source of practical clinical experience, as will be noted from the positions for observation among the insane.

It is a good little book for ready reference by the general practitioner and will post anyone who may read. The price is \$1.25.

Its purchase will repay the purchaser. The subjects of police court insanity, indecent exposure and assaults, incendiarism, infanticide, kleptomania, suicide and drunkenness are interesting features of this book to the doctor and public.

TWENTY-FIRST BIENNIAL REPORT OF THE ELGIN STATE HOSPITAL at Elgin, Illinois, to July 1, 1911, Dr. Sidney D. Wilgins, Superintendent, comes to us without illustration of its beautiful buildings and ground. Why is this thus? The public needs the object lessons of all possible illustrations of the home-like beauties of location and comforts of all similar institutions, against which ignorant and groundless prejudice so often exist and the picture of this beautiful institution and its enclosed environments ought never to be absent from its reports.

We have known this institution and its merits and beauties of structure, location and management from before the days of the worthy Dr. Kilbourn. We speak from personal knowledge and observation.

REPORT OF THE NEW JERSEY STATE HOSPITAL at Morris Plains for the year ending October 31st, 1910, coming in the same mail with the preceding report in the interest of popular enlightenment on insane hospital and one of the best managed, beautifully built and surrounded hospitals in the United States, makes in our judgment the same mistake of omission. The people should be constantly shown the home-like attractiveness of these worthy institutions which are too little understood and too often regarded as prisons and with unjust distrust by the ignorant.

"LITORA ALIENA" comes to us for review. Wm. M. Leonard, 101 Tremont St., Boston, is the publisher. Price 50c.

This is an interesting series of letters sent to the *Boston Medical and Surgical Journal* by one of its ablest and most observant editors while recently in Europe presenting scenes and interests as they appear and appeal to a physician. They contain much of rarity in entertainment and instruction in medical literature.

Commendation and demand for the numbers of the journal containing these letters has prompted the publication of them in the book form before us which we commend to our readers.

THE PERSONAL OR BUSINESS SIDE OF A DOCTOR'S LIFE. By J. MacDonald, Jr., M. D., New York, Pres. A. Med. Ed. A. and Editor A. Jour. Surg., from American Medicine.

This practical brochure, interesting to all who have to earn their living in the practice of medicine, concludes appropriately with Lydston's parody on Bryant's *Thanatopsis*.

"So live, that when thy summons comes to join the enumerable caravan which moves to that mysterious bourne, peopled by doctors who have died of in-nutrition, thou go not like the general practitioner called at night, scourged from his office, but sustained and soothed by the motto, 'never trust' and

approach thy grave like one who wraps his stocks and bonds about him and lies down to peaceful dreams."

CONTRIBUTIONS FROM THE PHYSIOLOGICAL LABORATORY OF THE MEDICO-CHIRURGICAL COLLEGE OF PHILADELPHIA. By Isaac Ott, A. M., M. D., Professor of Physiology, and John C. Scott, M. D., Demonstrator of Physiology, being Part XVIII of Ott's Contributions to Physiology, has the following interesting contents:

(1) Action of Glandular Extracts upon Tetany after Parathyroidectomy. (2) The Parathyroid Glandules. (3) Action of Glandular Extracts upon the Pupil. (4) Action of Glandular Extracts upon the Contractions of the Uterus. (5) Action of Glandular Extracts upon the Secretion of Urine. (6) Action of Bile and Some of Its Constituents upon Intestinal Peristalsis and the Circulation. (7) The Action of Phenolphthalein, Cascara Sagrada, and Ergot upon the Intestinal Movements. (8) Effect of Tetra-Hydro-Beta-naphthylamin on the Temperature when the Blood Supply by the Carotid Is Blocked by Paraffine.

Following are the conclusions of this interesting biological contribution:

Their experiments show that:

- (1) Removal of the parathyroids alone causes tetany.
- (2) Pituitary extract will temporarily cure tetany.
- (3) Between the parathyroids and the pituitary there is a co-operative action.
- (4) The infundibular lobe contains the active principle.
- (5) Tetany is not due to a want of calcium but to a poison in the blood.
- (6) The removal of parathyroids in the cat produces paræsthesia, probably by an action on the centre of touch, shown by the lifting of the feet as though they were wet with water.

THE ORGANIC BASIS OF NEURASTHENIA. By John M. Swan, M. D., Watkins, N. Y., Medical Director of the Glenn Springs, and Charles Clyde Sutter, M. D., Watkins, N. Y., Assistant Physician to the Glen Springs. Read before the

Syracuse Academy of Medicine, December 6, 1910, from the *New York Medical Journal*.

The tenor of this interesting paper may be gleaned from the following interesting sentences.

In medicine there has always been what might be called a scrap heap. This scrap heap has sometimes been called malaria and sometimes rheumatism and * * * it seems likely that neurasthenia will be added to these two, if it does not take the place of them.

INFANTILE PARALYSIS IN MASSACHUSETTS IN 1908. Reported for the Massachusetts State Board of Health. By Robert W. Lovett, M. D., of Boston and Herbert C. Emerson, M. D., of Springfield, Mass. Reprint, July, 1909.

This epidemic was characterized by the number of cases in middle and late childhood and young adult life. There were six cases over seventeen years of age, all in males. The ages ranged from under one year to twenty-five. A total of sixty-nine cases, forty-two males and twenty-seven females, are reported.

As the outbreak occurred in July and August there were no results that could be attributed to school influences and but three of the children attended school.

The outbreak of this epidemic was during July and August at the time when the heat of the body surface is subjected to variations of heat and cold.

The occurrence of this paralysis in epidemic form is a new feature in its history. Other states give somewhat similar showing. Our personal expression gleaned from personal observation of cases not appearing in epidemic form suggests the sudden chilling of the surface circulation and microbic invasion at this time, as appears in pneumonia, whatever may be the infectious agent in poliomyelitis.

A MANUAL OF PSYCHIATRY. By De Fursac, translated by Rosanoff and published by Wiley and Sons, again on our review table, is one of the best of the good ready reference small text books on this important subject, now eliciting much more than former interest from students

of anthropology in its higher phases and physicians of research, thought and success. It can be carried in the overcoat pocket and used for ready reference. No medical student should be without it.

E. MERCK'S ANNUAL REPORT. The latest edition of Vol. XXIII received.

Besides the usual comprehensive review of recent literature of note on pharmaceutical chemistry and therapeutics, there is a chapter on Serum Therapy and Bacterio-Therapeutic Preparations that will commend itself as of special interest to our readers.

Among the most interesting reports from a therapeutic viewpoint is that on the use of Perhydrol for combating nasopharyngeal and oral infections. Dr. Simon Flexner, of the Rockefeller Institute for Medical Research, recently pointed out that the virus of poliomyelitis can enter the nervous system through the abraded mucous membrane of the nose, and that the virus is quickly destroyed by a dilution of Perhydrol. It is similarly useful in summer catarrh and scarlet fever.

THE TREATMENT OF ARTHRITIS DEFORMANS. By Clarence Edward Skinner, M. D., LL. D., Medical Superintendent of the Elm City Private Hospital, New Haven, Connecticut. Reprint from the *American Journal of the Medical Sciences*, November, 1910.

The author thus concludes:

"Up to the present time the author has had under observation 160 cases and the percentages have changed so that they now read as follows: 25 per cent. have been apparently cured; 65 per cent. have been benefited in varying degrees, and 10 per cent. have been entirely uninfluenced by treatment. The increase in the apparently cured cases he attributes to the fact that a greater number of early cases have been treated since the first series was reported."

"While 25 per cent. of cures cannot be looked, he says, upon as a particularly brilliant showing, and asks us to consider that out of 160 cases 40 discontinued treatment prematurely for various reasons, some while they were deriving benefit in

varying degrees, and that the vast majority of them were late cases, and concludes himself justified that the prognosis under the later therapeutic methods is not nearly as gloomy as it has been in the past, and that early diagnosis is of the first importance, because the vast majority of early cases respond happily and promptly to appropriate management."

CHOREA, (St. Vitus' Dance.) By John Aulde, M. D., Philadelphia. Reprint from the *New York Medical Times*.

In conclusion the author offers the following:

RATIONAL TREATMENT OF CHOREA—EPITOME.

- | | | | | | | | | |
|--------------------------------|--------------------------|---|---|---------------------|---|--------------------------|---|----------------------|
| I. <i>Idiopathic:</i> | { | Remove reflex irritation—Worms, carious teeth, phimosis, injury. | | | | | | |
| | { | Improve faulty nutrition—Anemia, mucous catarrh, rheumatism. | | | | | | |
| | { | Correct chemic deviation—Neutralize acidity, promote magnesium dissociation. | | | | | | |
| II. <i>Septic Infection:</i> | { | Improve assimilation, primary and secondary. | | | | | | |
| | { | Neutralize acid excess—Restore normal alkalinity of body fluids. | | | | | | |
| | { | Promote magnesium dissociation— | | | | | | |
| | { | <table border="0" style="display: inline-table; vertical-align: middle;"> <tr> <td style="vertical-align: middle;">{</td> <td>Simple replacement.</td> </tr> <tr> <td style="vertical-align: middle;">{</td> <td>Chemical transformation.</td> </tr> <tr> <td style="vertical-align: middle;">{</td> <td>United with calcium.</td> </tr> </table> | { | Simple replacement. | { | Chemical transformation. | { | United with calcium. |
| { | Simple replacement. | | | | | | | |
| { | Chemical transformation. | | | | | | | |
| { | United with calcium. | | | | | | | |
| III. <i>Arterio-sclerosis:</i> | { | Restore the digestive capacity. | | | | | | |
| | { | Neutralize acid excess. | | | | | | |
| | { | Promote magnesium dissociation. | | | | | | |
| IV. <i>Pregnancy:</i> | { | Restore the digestive capacity—Improve metabolism. | | | | | | |
| | { | Neutralize acid excess—Restore normal alkalinity of body fluids. | | | | | | |
| | { | Promote magnesium dissociation— | | | | | | |
| | { | <table border="0" style="display: inline-table; vertical-align: middle;"> <tr> <td style="vertical-align: middle;">{</td> <td>Simple replacement.</td> </tr> <tr> <td style="vertical-align: middle;">{</td> <td>Chemical transformation.</td> </tr> <tr> <td style="vertical-align: middle;">{</td> <td>United with calcium.</td> </tr> </table> | { | Simple replacement. | { | Chemical transformation. | { | United with calcium. |
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| { | United with calcium. | | | | | | | |

THE ECONOMIC VALUE OF FAMILY PHYSICIAN REFRACTING.

By Leartus Connor, A. M., M. D., Detroit, Mich.

This is one of the last contributions of this well known and accomplished and now lamented physician to the good of the profession and people. Connor worked well for the welfare of his profession and died on duty, the field of honor of the physician.

THE BULLETIN OF WASHINGTON UNIVERSITY, scientific and literary number for April, 1911, is one of the most interesting, to the general reader, of the series of always entertaining brochures published by this greatly revived University.

The history of Creve Cœur Lake alone will repay anyone for its perusal, but the entire table of contents is attractive and profitable reading, beginning with Chinese Boycotts and concluding with "Homer's Women."

The intervening subjects are: Keat's Letters and their Revelation of the Man, The Idea of Weltliteratur in Eighteenth Century Germany, Gleanings from Italian Fields, Education Downward, Remarks on Classical Instruction, Elements of Effective Education, and Creve Cœur Lake already referred to.

This extract, Malcolm Earl Wilson, Instructor in Geology, Washington University, will serve to show what use W. U. is making of this lake and to what extent the psychic appetite of the geological student for the full meal is given in this interesting number of the Bulletin series. We regret lack of space for more.

THE SAW AND CRUSHING INSTRUMENTS IN SURGERY OF THE NASAL SEPTUM. By Bryan DeF. Sheedy, M. D., New York, Adjunct Professor of Rhinology and Laryngology, Fordham University Medical College; etc. "I am wholly in accord with you in discarding the saw and crushing instruments in the correction of deflections of the nasal septum and in the removal of bony and cartilaginous prominences."—Otto Freer.

This is the trend of this article.

VASOMOTOR NASAL OBSTRUCTION. Nasal Catarrh. Same author as preceding.

L'ANALYSE PHYSIOLOGIQUE DE LA PERCEPTION. Par Edouard Abramowski, Chef du Laboratoire de Psycho-Physiologie de Varsovie.

Acute Bright's Disease. By William Henry, Harmon, Ill., reprinted from the *New Albany Medical Herald*.

Observations on the Surgery of Tetanus. By G. Wiley Broome, M. D., St. Louis, Mo. Reprinted from the *Southern Medical Journal*.

This paper is especially intended as a plea for more strenuous activities on the part of the surgeon in regard to a more radical, more vigorous and more intelligent application of the principles of antisepticism in the early treatment of wounds, *i. e.*, at the first treatment, even though such a wound appears trivial, especially if it is of the anacrobiotic class.

Transaction of the Congress of American Physicians and Surgeons, Eighth Triennial Session, held at Washington, D. C., May 3rd and 4th, 1911. Published by the Congress. The address of the President, Dr. Edw. L. Trudeau, was on the value of Optimism in Medicine. Artificial immunization and vaccine therapy, so closely allied thereto, received much attention from this important Congress.

This translation of the fifth edition of Professor Oppenheim's scholarly work has been undertaken by Dr. Alexander Bruce, the editor of the *Review of Neurology and Psychiatry*, with the sanction of the author, in consequence of suggestions from numerous quarters that a work which holds such a high position in the estimation of those who can read it in its original form should be made more easily accessible to English and American readers.

Transactions of the American Therapeutic Society for 1910 gives many interesting and instructive contributions to a most important and perhaps of late too much neglected department of practical medicine. Among the many all good papers, the most important is perhaps Dr. Lyman F. Kebler's showing of the status of drug addiction in the United States. The editor is P. Bryanberg Porter, A. M., M. D. F. A. Davis Company, Philadelphia, are the publishers.

The Symptom-Complex of the Acute Posterior Poliomyelitis of the Geniculate, Auditory, Glossopharyngeal and Pneumogastric Ganglia. J. Ramsay Hunt, M. D., New York.

A well illustrated contribution with good anatomical, pathological and symptomatic plates and text ably written with an extensive special biographical reference.

Conclusions Based Upon Observation of Five Hundred Cases of Fractured Skull. By Walter C. G. Kirchner, M. D., Superintendent and Surgeon-in-Charge City Hospital, St. Louis, Mo. From the *Southern Medical Journal*.

Hagee's Cordial of the Extract of Cod Liver Oil Compound. Katharmon Chemical Co., St. Louis, Mo.

Hagee's cordial of the extract of cod liver oil compound is offered to the profession as containing all the medically active constituents of Cod Liver Oil without any of the fat. This little brochure before us will prove interesting reading to the practicing physician with its account of Gautier's results and tabular showing of the chemical and therapeutic constituents and principles of cod liver oil.

A Primer of Clairaudience and Delusional Insanity. Second Edition. By J. Barker Smith, L. R. C. P.

This book takes no adequate rational account of morbid delusion dependent on disease involving the brain.

The Treatment of Syphilis With "606" (Dioxidiamidoarsenobenzol)—A Preliminary Report of Personal Experience in 40 Cases. By Joseph L. Boehm, Ph. G., M. D., St. Louis, Mo. From *Medical Fortnightly*, St. Louis, Mo.

Report of Committee on Promotion of Family Physician Refracting. By Leartus Connor, Chairman, Detroit; A. R. Baker, Cleveland, Ohio; J. Thorington, Philadelphia. Reprinted from the Journal of the American Medical Association.

Pleural Effusions, Their Diagnosis and Treatment. By E. B. Montgomery, M. D., Quincy, Ill. From the *Medical Fortnightly*.

A Brief Review of the Applications of Roentgen Rays in Diagnosis. By E. W. Caldwell, M. D., New York, Visiting Physician to the Roentgen Ray Dept. Presbyterian Hospital, New York.

Among other good radiographic pictures a splendid illustration of frontal sinusitis is shown in this brochure.

Personal Experiences With Pellagra. By Paul V. Anderson, M. D., Morganton, N. C. From the *Med. Rec.*

Pellagra, Two Cases with Necropsy. By Paul V. Anderson, M. D., of Morganton, N. C., and William G. Spiller, M. D., of Philadelphia. From *Amer. Jour. of Med. Scien.*

The Value of Employment in Cases of Dementia Præcox. By Paul V. Anderson, M. D., Morganton, N. C. From *Charlotte Med. Jour.*

The Medical Treatment of Pulmonary Tuberculosis. By Claude C. Keeler, M. D., Denver, Colo. Reprint by permission of the author.

Pernicious Vomiting. By S. H. Blodgett, M. D., Boston, Mass., Massachusetts Homeopathic Hospital, *Progress*.

American Association for Labor Legislation. Publication No. 10. The fundamental purpose of labor legislation is the conservation of the human resources of the nation. First National Conference on Industrial Diseases, Chicago, June 10, 1910.

The Action of Sodium Benzoate and Benzoic Acid on the Human Organism. By C. A. Herter, U. S. Referee, Professor of Pharmacology, Columbia University, Consulting Physician City Hospital.

Some Phases of Asthenopia. By Dwight W. Hunter, M. D., New York. From the *New York Medical Journal*.

Common Salt and Fluid Retention. A Clinical Example. By Earl D. Bond, M. D., Assistant Physician, McLean Hospital, Waverley, Mass. From the *Boston Med. and Surg. Jl.*

A good, brief, practical clinical research monograph. *Vide* Neurotherapy Department A. & N.

Hyoscine Hydrobromide as an Adjunct to Cocain Anesthesia and Preventive to Cocain Poisoning. Myron Metzenbaum, B. S., M. D., Cleveland. From the *Ohio State Medical Journal*.

Submucous Resection for the Correction of Septum Deflections with Description of Author's Instruments. Myron Metzenbaum, B. S., M. D., Cleveland.

National Perils and Hopes. A new book with 1910 statistics, by Dr. Wilbur F. Crafts; 148 pages, cloth, 50 cents; paper, 25 cents.

Cancer of the Uterus. By H. J. Boldt, M. D., New York City. Oration on Surgery, delivered at the meeting of the Medical Society of the Missouri Valley, St. Joseph, Mo., March 18, 1909, and printed in the *Medical Herald*.

Preliminary Report of Cases Treated by the Ehrlich-Hata "606" Injection. By Charles H. Chetwood, M. D., New York. Professor of Genitourinary Surgery, New York Polyclinic Medical School and Hospital. Reprinted from *Medical Record*.

Antimeningitis Serum. (Anti-Meningococcic Serum.) Mulford's Working Bulletin No. 8.

Depressions. By E. Moore Fisher, M. D., Assistant Physician, State Hospital, Morris Plains, N. J.

Possibly a Way for the Cure of Seminal Vesicle Infection With Case Reports. Charles E. Barnett, M. D. From the *New York Medical Journal*.

The Physician and the Deaf Child. By M. A. Goldstein, M. D., St. Louis, Professor of Otology and Laryngology, St. Louis University, etc. A good paper.

Fifty-Ninth Annual Report of the Managers of the Syracuse State Institution for Feeble-Minded Children for the year 1909, Part 1.

The Progress of Therapeutics. By J. C. Wilson, M. D., Professor of Practice of Medicine and Clinical Medicine in Jefferson Medical College, Philadelphia.

A good and timely address.

Genital Canal Block Following Neisser Coccus Infection. By Charles E. Barnett, M. D., of Fort Wayne, Ind. From *Annals of Surgery*.

Albany Hospital, Eighth Report of Department for Mental Diseases, for the Year Ending September 30, 1910. By Montgomery Mosher, M. D., Attending Specialist in Mental Diseases. From *Albany Medical Annals*.

Intestinal Obstruction from Appendiceal Adhesions. By C. R. Dudley, M. D., St. Louis, Mo. Reprinted from *The Medical Fortnightly*.

Illustrations for a Paper on Dislocations of the Atlas. By Carl E. Black, M. D. At the Thirty-Sixth Annual Meeting of the Mississippi Valley Medical Association, Detroit, Michigan, Sept., 1910.

On the Value of a Rice Diet in Certain Acute Diseases of the Skin. Being a Paper read in the Section of Dermatology at the Annual Meeting of the British Medical Association, London, July, 1910. By L. Duncan Bulkley, A. M., M. D., Physician to the New York Skin and Cancer Hospital; Consulting Physician to the New York Hospital. Reprinted from the *British Medical Journal*, September 24th, 1910.

Family Physician Refracting as a Factor in Medical Practice, and Its Promotion During 1910. Leartus Connor, M. D., Detroit, Mich.

A Clinical Study of the Cammidge Reaction in the Urine. By John M. Swan, M. D., and John J. Gilbride, A. M., M. D., Philadelphia. Reprinted from the *New York Medical Journal*.

Leprosy. By L. Duncan Bulkley, A. M., M. D., New York, Physician to the New York Skin and Cancer Hospital, Consulting Physician to the New York Hospital, Etc. Reprinted from the *Medical Record*.

Some Remarks on Intestinal Parasites. By John M. Swan, M. D., Medical Director of the Glen Springs, Watkins, N. Y. Reprinted from the *Pennsylvania Medical Journal*.

Some Facts the Public Should Know About the Ear and Its Treatment. By Louis J. Lautenbach, A. M., M. D., Ph. D., Philadelphia, Pa.

Dementia Praecox. By Arthur H. Harrington, M. D., Superintendent of the State Hospital for the Insane, Howard, R. I. From the *Providence Medical Journal*.

Contributions like this from direct sources of clinical experience are monographs of merit for the physician, jurist and others.

On the Alleged Occurrence of Trimethylamine in Urine. By C. C. Erdmann. From Chemical Laboratory, McLean Hospital, Waverly, Mass. *Journal of Biological Chemistry*, July, 1910.

On Alkylamines as Products of the Kjeldahl Digestion. By C. C. Erdmann. Chemical Laboratory of the McLean Hospital. From *Journal of Biological Chemistry*.

The Modern Doctor—His Successes, His Failures, His Future. By John K. Mitchell, M. D., Philadelphia, Pa.

A Case of Crossed Hemidysergia and Tremor, with Asynergia of Binocular Movements: Comments by Tom A. Williams, M. B., C. M. (Edin.), Washington, D. C.

Contributions to the Literature of Fatigue. By Dr. F. L. Wells. From the *Psychological Bulletin*, November, 1910,

The Problem of the Acute Mental Case. Read at the Meeting of the Medical Association of North Berkshire, held in North Adams, Mass., December 14, 1909. By J. Montgomery Mosher, M. D.

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PUBLISHER'S DEPARTMENT.

A SUCCESSFUL BUSINESS AND PHILANTHROPIC CAREER with a genuine dash of romance about it came to an end with the death of Mr. William Bradbury Robinson, at the age of eighty-four, last week. The best summary of this we have seen appeared in the *Times*: "Mr. William Bradbury Robinson was one of the best-known public men in Derbyshire, and one of the pioneers in the country of medical lint manufacture. He was practically the founder and the head of the firm of Robinson & Sons (Limited), the patentees and manufacturers of medicated lint, surgical bandages, tissue, etc. The son of a chemist, seeing the need of a satisfactory article he set himself to solve the rapid manufacture of lint and surgical bandages. In 1854 he came across a small machine which had been worked by a woman in the county town, and bought it and any rights possessed in it for 27s. 6d. Mr. Robinson, by means of mechanical improvements, was able to produce a machine which was capable of putting on the market a cheaper and a better article. From that small beginning a great manufactory employing many hundreds of hands has been built up. From the weaving of cloth followed the lint industry, bleaching followed the calico weaving, then came the manufacture of absorbent cotton wool, antiseptic dressings, and medicated bandages. Enormous consignments were used in the army hospitals during the Russo-Japanese War, and it was the proud boast of Mr. Robinson that during the South African war his firm sent enough cottonwool to South Africa to wrap up the whole British Army in! The firm is contractor to most of the London hospitals."—*The Hospital*, 1911.

TUBERCULAR ADENITIS.—Glandular tuberculosis presents a problem to the clinician not easy of solution, for its management involves not alone the application of drugs, but also the

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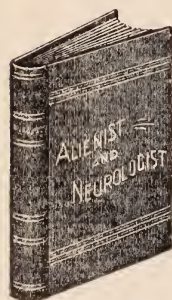
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Physicians, parents, guardians, or friends who desire to place any mental or nervous patients in a quiet well-furnished home where they can receive good care, and Homeopathic treatment, should visit Easton before making arrangements elsewhere. Over twenty years experience in the Middleton (N.Y.) State Hom. Hospital. Phone 1661. For Circulars, address

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selection of proper diet and the ordering of and obedience to a hygienic regime which may be extremely difficult of regular enforcement. Next to fresh air and sunshine, an abundance of nutritious food, cod liver oil offers the largest measure of success and is a necessary adjunct to the foregoing measures. Since the majority of these patients are children of tender years, great care in the choice of the cod liver oil product must be exercised if the physician would derive from it the fullest remedial benefits.

The essentials of a cod liver oil preparation are effectiveness and palatability, and these qualities are surely found in Hagee's Cordial of the Extract of Cod Liver Oil Compound. For these reasons, Cord. Ext. Ol. Morrhuae Comp. (Hagee) is especially indicated in scrofulous conditions, and will prove to be the physician's most dependable selection from *materia medica*. It may be continued for indefinite periods.

FORMULA OF SYRUP COCILLANA COMPOUND.—Parke, Davis & Co. thus give and analyze the formula of this cough compound: euphorbia pilulifera—serviceable in the treatment of chronic bronchitis and emphysema; wild lettuce—a mild and harmless narcotic, useful in spasmodic and irritable coughs; cocillana—valuable expectorant, tonic and laxative, exerts an influence on the respiratory organs similar to that of ipecac; syrup squill compound—serviceable in subacute or chronic bronchitis, as an expectorant, and as an emetic in croup; cascarn—the bitter glucoside of cascara sagrada, useful for its laxative action; heroin hydrochloride—a derivative of morphine and extensively prescribed in the treatment of coughs, especially of bronchial origin; menthol—stimulant, refrigerant, carminative and antiseptic, serviceable in coughs of pharyngeal origin.

Syrup Cocillana Compound would seem to be worthy of extensive prescription.

EUROPEAN DOCTORS NOT A SUPERIOR LOT.—The recent letter from Vienna of a correspondent of the *Journal A. M. A.* is most surprising. We are told that the number of medical men in Hungary is increasing constantly. This is due, it

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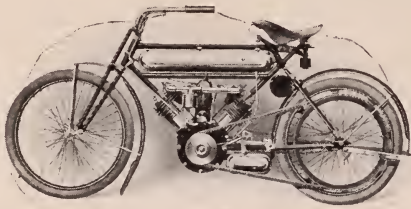
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THE ALIENIST AND NEUROLOGIST.

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No. 3.

HYSTERIA.

BY GEORGE F. BUTLER, A. M., M. D.,

Professor and Head of Department of Therapeutics and Professor of Preventive and Clinical Medicine, Chicago College of Medicine and Surgery, (Medical Department of Valparaiso University, etc.)

THE conception of hysteria which predominates in folklore to-day, and which to a certain extent dominated early medicine is that it is due to the spirit of the "mother" (or womb) which affects both sexes. The womb as late as Shakespeare's time was still the "mother." King Lear says,

"O how this mother swells up toward my heart,
Hysterica passio; down, thou climbing sorrow,
Thy elements below."

One folklore belief still entertained in many states is that unless the funis be cut and tied to the thigh of the child the placenta escaping into the womb causes "the spirit of the womb" to affect disastrously future offspring to both sexes. The Greek conception of hysteria was that it was due to movements or spiritings of the uterus which, as Hippocrates supposed, was freely movable and under certain conditions rushed upward, pushing the thoracic viscera into the throat and causing the sensation of choking. Hysterical symptoms affecting other parts of the body were likewise explained on the theory of the wandering of the uterus. According to Plato: "In men the organ of generation becoming rebellious and masterful

like an animal disobedient to reason, and maddened with the sting of lust, seeks to gain absolute sway; and the same is the case with the so-called womb or uterus of women; the animal within them is desirous of procreating children and, when remaining unfruitful long beyond its proper time, gets discontented and angry, and, wandering in every direction through the body, closes up the passages of the breath, and by obstructing respiration drives them to extremity, causing all varieties of disease."

Plato, while not a scientist, gave a synopsis of the current view of Greek physicians as to hysteria. The same opinion persisted among the Roman physicians until the time of Galen. Aretaeus (the Roman Esquirol) adopts this idea to the movement of the womb in hysteria, and adds that, "it delights also in fragrant smells and advances toward them, and it has an aversion to fetid smells and flies from them, and, on the whole the womb is like an animal within an animal." If the womb were suddenly carried upward "there would occur a choking as in epilepsy but without spasms, the limbs moving irregularly with loss of speech and impairment or loss of sensation."

The more frequent occurrence of hysteria in the young was accounted for by the belief that in old women the womb was more tightly bound down and was less free to wander all through the body. Galen believed that the womb, being stationary, could not wander about the body. He claimed that the menstrual blood dammed up in the uterus underwent putrefactive changes, which with undue retention of the female seminal fluid, was the cause of hysteria. Aetius ascribed to the vapors proceeding from the retained menstrual and seminal fluid the phenomena of hysteria. Neither Galen, Aetius, nor Paulus Aeginita clearly comprehended Hippocrates, although they thought by substituting vapors for his spirit of the womb, to make more tangible the influence of the uterus. In Shakespeare's time the view that hysteria was an offspring of the "spirit of the womb" affecting both sexes was still dominant even among physicians. Certain miracles were even then ascribed to the influence of suggestion on hysteric subjects.

In 1618 Charles Lepois denied the dependence of hysteria upon the uterus, calling attention to the fact that it occurs in men also, and claiming that the seat of hysteria is the brain; and Van Helmont, in 1650, advocated the theory of Galen which with its "humoral" and other modifications was accepted by Primrose (1650), Sylvius (1660), Etmuller (1660), Purcell (1707), Pitcairne (1701), Schact (1747) and others. Hochstetter and Thomas Willis about the same time (1660) claimed that hysteria was a convulsive disease of cerebral origin. Highmore believed that the malady was a disease of the whole system. In Sydenham's opinion the animal spirit rushing upward from the womb affected the nervous system. According to Morgagni the uterus was the starting point of hysteria, an irritating factor originating there being carried by the nerves to the brain. A. Cullen claimed that, while there was a relationship between hysteria and gastrointestinal disorders, hysteria was an affection of the nervous system originating in the reproductive apparatus. "It was a mobility of the system depending generally upon a plethoric state."

Purcell and Vogel located hysteria in the stomach; Amard in the lumbar enlargement of the cord; Boerhaave and Pomme in the nervous system. As Lefranc remarks: "Many of the earlier authors believed with Hippocrates in the aberrations of the uterus. A large number supposed the proximate cause of the disease to be the retention or putrefaction of the semen or menstrual blood and the distribution of malignant vapors over the body. More modern authors still continue to regard the uterus as the seat of the disease, but suppose no other pathologic alteration in its condition than some modification of its special nervous system. Somewhat later it was believed that hysteria was a general nervous affection with no more precise seat than the nerves."

The view of Lepois, advanced in 1618, is now practically dominant. The claim of Forest that hysteria was due to retention of the female seminal fluid for which coitus was a cure, or, when that was not allowable, uterine massage with musk sufficient to bring on an orgasm, was strongly held in the 18th and 19th centuries. Louyer Villermay (1816) asserted that the most frequent causes of hysteria are deprivations of the

pleasures of love, griefs connected with the passion and disorders of menstruation. Foville (1833) and Landouzy (1846) advocated somewhat similar views. Laycock (1840) quoted as "almost a medical proverb" the saying, *Salacitas major, major ad hysteriorum proclivitas*," fully endorsing it. More recently Clouston defines hysteria as "the loss of the inhibitory influence exercised on the reproductive and sexual instincts of women by the higher mental and moral functions." Two gynecologists, Hegar in Germany and Balls-Headly in Australia, attributed hysteria, as well as anemia, largely to unsatisfied sexual desire, including non-satisfaction of the "ideal feelings." Lombroso and Ferrero while admitting that sexual feeling might be either heightened or depressed in hysteria, point out the frequency of what they termed "a paradoxical sexual instinct" in the hysteric by which, for instance, sexual frigidity is combined with intense sexual preoccupation; and the insignificant fact that the crimes of the hysteric nearly always revolve around the sexual sphere.

The modern views regarding the etiology of hysteria are well summed up by Charles K. Mills, who says that (1) The anatomical changes in hysteria are temporary. (2) These changes may be at any level of the cerebrospinal axis but are most commonly and most extensively cerebral. (3) They are both dynamic and vascular; the dynamic are of some undemonstrable molecular character; the vascular are either spastic or paretic, more frequently the former. (4) The psychic element enters in that either on the one hand, violent mental stimuli which originate in the cerebral hemispheres are transmitted to vasomotor conductors; or, on the other hand, psychic passivity or torpor permits the undue activity of the lower nervous levels. From this summary of the manifestations of hysteria the question naturally arises, what are the characteristic symptoms of this disorder? To say with Charcot that the disorder is largely a psychic one occurring in hereditarily predisposed subjects, whose essential psychic state is suggestibility, explains nothing. This hypothesis does not demarcate hysteria from neurasthenia nor from various states produced by physical and mental shock wherein the conditions described may obtain.

According to Patrick certain anesthetics are typical of hysteria: First, that in patches, single or multiple, regular or irregular, without any relation to the distribution of the sensory nerves. These patches may be located anywhere on the body, but their existence is frequently unknown to the patient. The so-called stocking, glove or sleeve anesthesia, that corresponds in distribution to the garment named, and stops short of a circular line about the extremity, occurs in scarcely any other disease except multiple neuritis and here only in a modified form, the anesthesia gradually decreasing from the extremity of the limb toward the trunk and shading off into the normal. A hemianesthesia which is limited sharply and exactly by the middle line, especially if it involves the special sense on the same side, is equally characteristic. Another distinctive manifestation of most hysteric anesthetics, is that they do not interfere with cutaneous reflexes and automatic accomplishment. For instance, a woman with total anesthesia of the hand will tie a bow beneath her chin with her usual dexterity. A man with complete anesthesia of the buccal cavity will find no difficulty in the manipulation of the alimentary bolus. These acts would be impossible in organic anesthesia. An hysterical anesthesia too, is usually out of all proportion to the paralysis, whereas in organic affections just the reverse holds true, the motor functions suffering more than the sensory. A complete anesthesia of the entire body in a patient still able to walk about, is sure to be hysterical, as is also one which varies rapidly in distribution or degree.

Among the anesthetics may be mentioned concentric contraction of the visual field with inversion of all the fields which are symmetrically contracted, that for blue being as small or smaller than that for red, while for the normal eye it is distinctly larger. A striking peculiarity of this contraction of the hysteric visual field is that, even when extreme, it does not cause the patient in moving about to collide with objects lying outside the hysteric, but within the normal, field—that is, with objects which he does not see.

Another eye symptom pathognomonic of hysteria is monocular amaurosis with binocular vision. Prisms, the

apparatus of Bleebs and other devices demonstrate that under certain conditions the patient does see with the blind eye. Hysteric amblyopia and amaurosis are frequently accompanied by anesthesia of the eyelids and conjunctiva.

A monocular diplopia or polyopia is hysteric, as is also micropsia or macropsia. These, like many other symptoms, may be unknown to the patient and must be sought.

Loss of the pharyngeal reflex, tenderness to the left of the cervical spine, and of the ovarian region, and what Pitres has called haphalgnesia, are important stigmata. The last is rare and is an intense hyperesthesia of touch for substances, as brass, et cetera. In hysteric paralysis of an extremity the various muscular groups are nearly equally affected; isolated paralysis and hence paralytic deformities, as wrist-drop and talipes, are of rare occurrence. On the other hand deformity due to contracture is frequent. Relaxing the affected muscles by position has here no effect on the contracture. For instance, contracture of the fingers is not relaxed by forcible flexion of the wrist as in organic disease. Hysteric paralysis of the face is very rare, while facial contracture which may simulate it, is not very infrequent.

In hysteric hemiplegia or monoplegia there is not the "mowing gait," tipped pelvis and catching toe of organic disease. The paralyzed leg is dragged after the other or carelessly pushed forward and the foot set down flat. "Steppage" is unknown in hysteria. Paralysis for certain acts or manœuvres and not for others executed by the same muscle is hysteric, as is astasia-abasia in which the power of the legs is good with the patient in the recumbent posture, but not when he tries to stand or walk. Rhythmic spasm is almost without exception hysteric. In hysteric convulsions the pupillary light reflexes are not lost and the movements are purposive and hence palpably due to volitional impulse and imitate more or less closely movements executed with a purpose, while in convulsions of organic disease and of epilepsy there is reflex iridoplegia and the movements are inco-ordinate and often shock-like. In hysteric attacks, too, and immediately following them there is a change in the ratio of the urinary phosphates, the ratio of the earthy to alkaline being as one

to one instead of one to three, the normal. Finally the therapeutic test may quickly reveal the nature of the affection. Mental treatment, suggestion, hypnotism, or electricity, may produce so sudden a change in the symptoms as to make the diagnosis ridiculously easy. A severe hysteric affection may occur in an individual who has never shown any other hysteric symptoms, such an affection remaining unchanged for years, and be almost the sole sign of this omnivagant disease. Further fever, a rapid or sudnormal pulse, retention or incontinence of urine, loss of the sexual power or desire, loss of pupillary reflexes to light and ankleclonus, although indicating as a rule organic disease, may occur as symptoms of hysteria.

The "mowing gait," "steppage," et cetera, are found in certain spastic hysterics. The heart in hysteria is usually distinguished, as Whittaker remarks, by its easy excitability. The increase of action shows itself first after some emotional excitement or after stimulation by coffee, tea, alcohol, et cetera. It may amount to a genuine tachycardia though the frequency rarely exceeds one hundred to one hundred and thirty beats a minute. Retardation is much more rare, though reduction in the frequency of the pulse has been noticed in the so-called sleep attacks. Real attacks of palpitation are rare, although the patient may complain of a feeling of distress even though the action of the heart is so feeble as to be imperceptible. The pulse is increased after the slightest effort or physical excitement, the mere thought of exertion being sometimes sufficient to excite it. In the rarer cases of retardation the reduction of the cardiac forces may lead to syncope.

Sleep attacks in hysteria often simulate death. Hysteric angina is comparatively rare, though much more frequent than real angina. The condition is recognized by the emotional disturbance which usually evokes an attack and exists during it as well as by the absence of organic disease. Patients affected with hysteric angina express great mental distress. They wring their hands, throw themselves about and succeed in exciting and alarming everybody about them. False angina is distinguished by a different situation of the pains, which do not always begin in the neighborhood of the heart,

but sometimes in the extremities or wander about in irregular ways. The attack is associated with other evidences of hysteria such as emotional manifestations, eructations, polyuria, et cetera. Sometimes an attack may be produced by pressure upon hysterogenic surface.

Vasomotor disturbances are frequent in hysteria, alternating flushing and blanching of the face being very common. There may be attacks of sudden coldness of the hands and feet which may shortly afterward become burning hot. There is often a sensation of numbness in the fingers and toes. Discoloration of the hands, more especially of the fingers, has been frequently noticed. Sometimes the hands are white and the ends of the fingers and nails blue. In some rare cases the joints only are blue while the rest of the fingers are red so that the appearance is that of blue rings with crimson borders. The spastic contractions may be so intense as to prevent the escape of blood after puncture; it even having been observed that cups withdraw less blood from hysteric than from healthy subjects. Landouzy records cases in which the stroke of the finger nail or of a pencil would bring out a red line which might extend itself out to a broad red stripe. Occasionally there develops in the middle of the stripe a pale red lash-like elevation so that curious lines can be traced upon the skin in autographism. This condition has been observed in epilepsy wherein it, however, does not persist so long. Hysteric autographism may last for years. In this connection belongs also the condition of vicarious menstruation, with bleeding from the nose, mouth, ears, stomach, et cetera. Great difficulty in diagnosis often arises in this condition, as hemoptysis and hematemesis are especially frequent in young anemic women. The profession is more willing to accept a vicarious hemorrhage from the nose as epistaxis than as relief of surcharged congestions about the head. Studies of blood changes which occur in connection with menstruation, entirely independent of the refinement of the so-called Stevenson wave, account for the escape of blood from dilated paretic vessels, in unsupported places. While most cases of hemorrhage from the lung are due to manifest or latent tuberculosis there is no doubt that true hemoptysis results from suppressed men-

stration. In this connection one is reminded of stigmatization, as Doctor Harriet C. B. Alexander has pointed out. Many of these cases are due, as Doctor Alexander and Doctor Coomes have shown, to suggestion. Facachon and Alexander were able by suggestion to raise vesicles like those of blisters on the skin. Jendrassik and Kraft-Ebing produced eschars, and Bouren, Burot, Mabilie, Ross and others induced hemorrhages. It is, therefore, not so surprising that it occurs in certain hysteric patients who have concentrated their minds continuously upon the wounds of Christ, as was the case with Louise Lateau.

Hysteric affection of the lungs themselves is much more infrequent, but nervous disturbances in the larynx are among the most common expressions of the disease. Paroxysms of sneezing have frequently been recorded. So-called nervous cough is a great embarrassment in differential diagnosis. It is usually dry, unattended by expectoration and has a peculiar bellowing character distinguished as a "sheep cough." It is characterized by its excessive obstinacy, and often appears suddenly and as suddenly disappears under the influence of emotional excitement, the worst paroxysms being usually readily controlled for the time by diversion of the mind. Severity of the cough may eventually produce pain in the chest and hemoptysis.

Certain hysteric persons learn to draw blood from the mouth, gums, et cetera, sufficient to tinge the sputum. Doctor Whittaker reported the case of a hysteric patient who for one entire day expectorated a blue sputum. Instruction was given in the presence of the patient to have the next fresh sputum examined chemically and microscopically. This put an end to the discharge.

Aphonia is one of the most common manifestations of hysteria, usually in the form of adductor paralysis. The laryngoscope shows that the vocal cords are not approximated in phonation, though the glottis is closed in cough. The patients at times are unable to speak, but can still sing or express pain. Hysteric aphonia usually disappears, but many cases remain aphonic for years. When the voice is suddenly restored by artificial means, as by electricity, faith cures, miraculous in-

terventions, et cetera, the cure as a rule is not permanent but returns when the patient is removed from the impression. In a case reported by Lowenfeld the patient's voice had been reduced to a whisper for years. She was induced to repeat the letters of the alphabet at first in a low tone and louder and louder without notice having been attracted to the voice. When the woman found that she could articulate the letters distinctly she began to speak. The patient had been convinced that she was unable to speak and had made no effort to do so. The trial showed the ability without any reference to the will. Martins reported a case of hysteric aphonia in a servant in which diagnosis was established by the laryngoscope. The physician assured the patient that she would be able to utter a loud sound the moment he made pressure on the larynx. Under pressure the patient spoke with a loud distinct voice. After repeated experiments of the same kind he told her that she would be able to speak as long as she held her hand on the larynx. This experiment also succeeded perfectly. As soon as she took her hand away she was unable to speak. This condition lasted for weeks.

The diagnosis of hysteria as the base upon which symptoms are built is not the recognition of a disease but of distinguishing in an individual whether this or that symptom is of hysteric origin or nature.

The most essential thing in excluding hysteria is the recognition of the symptoms of organic disease or neurasthenia. Most organic diseases have symptoms which hysteria may imitate. Thus hysteria, as Sokolousky has shown, very markedly simulates tuberculosis; but it cannot present the expectoration, the bacilli and the physical signs of the disease. While the hysteria may imitate organic disease at the beginning it can easily be eliminated in the future course of the malady. Hysteria may present at the start the symptoms of an organic heart disease, but the conditions are easily separated later. Certain symptoms belong more definitely to hysteria, such as the paroxysmal attacks, the emotional dreams, sensory hemianesthesia, certain hyperesthesiæ, the globus hystericus, et cetera. It must, however, be remembered

that hysteria is a real disease of the brain cortex and that organic disorder may bring it on as a complication.

The mental types of the hysteric female are divided by Des Champs into three classes: Cerebral, genital (or sexual), and neuropathic (sensory or motor). These types may be pure or intermixed. The general characteristics are an absolute want of equilibrium in sensibility and will power. There exists a mobility of humor in direct relation with facial impressionability to external influence (external ideas of perceptions) or to internal states (intrinsic ideas.) The nerves vibrate to all sentiments coming from within or without and are registered without proper relation. One fact chased by another is forgotten. Another produces a momentary hyper-excitation which takes the place of truth, whence it is that falsehood is instinctive but the patient protests her good faith if accused of the same. This lack of equilibrium leads to decided modification of the mental faculties. Intellectual activity is over-excited, but in diverse degrees and variable ways according to the particular tendencies adopted. Absorbed by preoccupation or controlled by an idea, they become indifferent to all else. Their ideas are abundant and they rapidly pass from the idea to the act. Their vivid imagination, coupled with a bright intelligence, gives them a seductive aspect, but their judgment is singularly limited, attenuated or false. They judge excellently from a non-personal standpoint. They are quick at discovering faults, even of their own relatives, but faults attributed to themselves are repudiated. Their memory is capricious. They forget their faults and their actions under impulse, albeit these may be consciously done.

The cerebral type is led by the intelligence. She ignores what passes in the sensorium commune. She has little or no coquetry; what there may be is the result of intention and temporary. There is an ethical sense, frankness and nobility in her ideas, disinterestedness and tact in her acts and she is capable of friendship. Her tastes carry her to male pursuits in which she succeeds. She often becomes what is called a "superior woman" and too often what is called an incomprehensible woman. She has but little guile.

To the sensual type, voluptuousness is the aim of life and the center of her acts and thoughts. She is well endowed with guile and extremely diplomatic. She is full of finesse but not very delicate; her lack of scruple spoils her tact. She is ruseful, dissimulating and unconsciously mendacious. She despises friendship and needs watching. If circumstances permit she loses all delicacy, reserve and modesty. She is destitute of scruples. Her crimes are coolly remorseless.

The neuropathic type is one to which the grasshopper is a burden. Her nerves are always on edge. She is an heroic invalid who displays the air of a martyr about trivialities. This character of the hysteric recalls, as Kiernan remarks, the observation of Milne Edwards concerning the monkey character. Levity is one of its salient features and its mobility is extreme. One can induce it to shift in an instant from one mood or train of ideas to another. It is now plunged into black melancholy and in a moment may be vastly amused at some object presented to its attention. To these qualities it owes its teasing tendencies.

One of the mental expressions of hysteria is the tendency of the patient to accuse herself or others of sexual immodesty. So frequent, and so well known to physicians, are such accusations that a man trained in the traditions of the profession is obliged to regard any confession as to unchastity implicating a physician, and made by a woman, as being of a morbid origin. The court records of all countries are blackened by cases in which physicians have been condemned innocently on the confession of hysteric women. Confession, moreover, has long been regarded by jurists as of very dubious value as an evidence of guilt. The number of hysteric confessions is exceedingly large. In a case reported by Le Grand Du Saulle (*Les Hysteriques*) a hysteric female sent five persons to Cayenne (the French penal settlement) on a charge of rape. A member of the French Medico-Psychologic Association suspected from an after examination of the alleged victim that the whole story was of hysteric origin. Through his efforts the innocence of the convicts at Cayenne was demonstrated and they were released from their unmerited confinement. Toulmouche observed the case of a young girl

given to devotional exercises and much inclined to flagellation and asceticism. She one day cut herself with scissors six hundred times on various parts of the body, and asserted the wounds were made by a man who tried to outrage her. She finally confessed that the wounds were all self-inflicted. Huchard had under observation an eighteen-year-old girl who accused the vicar of the parish of having raped her. She stated that one day while she was praying in the church the vicar shut all the doors and requested her to go with him to the sacristy. There (she claimed) he made obscene proposals to her, and as she indignantly refused, he pointed a dagger at her; she fainted and during the faint (she alleged) he violated her. Upon being questioned during the trial her replies excited the suspicion of the medical expert. An examination ordered by the court revealed that she was still a virgin.

Tardieu has reported the case of an inmate of a Gascony convent who claimed to have been made the victim of all sorts of outrages therein. Her father, with full faith in what she said, denounced the alleged criminals. Finding, however, that his daughter's story was untrue, he took his life. In another case cited by Tardieu a girl charged two young men with having violated her, and introduced into her rectum and vagina, stones, splinters and iron, which had to be extracted with great pain. She had convulsive seizures followed by paralysis. The two men had been convicted and had been in prison for more than a year when the false nature of the accusation was discovered.

W. A. Hammond reports (*Treatise on Insanity*) the case of a twenty-two-year-old girl who carried on a systematic course of deception for several months, and not only greatly injured an excellent young man, but damaged her own character to such an extent that her family were compelled to move from where they lived. The patient, by wearing pads over her abdomen and gradually increasing their thickness, led to inquiry from her mother's suspicion whether an abdominal tumor existed. It was decided to consult an eminent gynecologist, when the girl with tears, lamentations and self-reproaches confessed that she was pregnant. Of course the distress of the family was very great. A great deal of anger was exhibited

towards the supposed miscreant who had ruined a virtuous woman. For a long time she refused to reveal the name of her seducer, but finally one morning she came downstairs with a letter which she had written to her father in which a full (but false) revelation of all the circumstances was made. In this letter she declared that a gentleman they all knew and respected was her seducer. Arrangements for her confinement were made in a distant city. At the same time it was resolved by her parents to arrange if possible for a marriage with the alleged destroyer of their daughter's honor. The father accordingly had an interview at which the gentleman was offered the alternative of immediate marriage or instant death. Denials and protestations were useless. He consented to a marriage, but only on condition that he should be granted an interview with the lady in presence of her parents.. This was agreed to. A meeting took place at once and the gentleman, who was a lawyer, succeeded by his tact and the directness of his questions in exposing the fraud and obtaining a full confession.

According to W. Goodell, the operative procedures of Sir James Simpson which were at first so wonderfully successful in coccygodynia, owed their effects to its hysteric nature. Strange as it may seem the coccygeal joint is liable to serve as a barometer of a kind of mental worry. The serious surgical blunder is, therefore, not infrequently made of extirpating for sheer hysteric coccygodynia this important bone, important from its muscular origins and insertions. He has known coccygodynia to attack a lady after the death of her mother. All treatment failed, but it was finally abruptly cured by her great resentment at the second marriage of her father.

Gallstone colic may occur in hysterics as a result of emotion without discoverable cause in the intestinal evacuation. Kiernan has reported cases in which it has recurred coincident with jealousy and had disappeared on increased attention by the husband. As C. K. Mills has shown, many of the symptoms of appendicitis may be mimicked by hysteria. These are the cases which are so often cured by Christian Scientist, Dowieite and metaphysician.

Besides the limitation of the visual fields to white light,

there exists at the same time decided disturbances of the color fields, as Preston points out. There may be total loss of color perception, achromatopsia, or only disturbance of the relative position and extent of the different color fields. The first of these conditions, achromatopsia, is not common, at least in this country. When it exists all objects appear of a uniform gray or sepia color. The second variety of color disturbance is frequently met with in hysteria. This consists of a perversion of the normal color fields or of a reversal of the fields. In the normal eye the fields for color are not co-extensive. Thus the larger field is for white light, then comes blue, red and green. The smallest field is that of violet. In hysteria these relations are altered. In some cases there is a simple restriction of the color fields in their normal color, but nearly always there is a reversal of the field. Thus the most frequent change is between the red and blue. Instead of blue occupying the largest field, as it does normally, its place is taken by red. Parinaud, commenting upon the fact that in hysteria the largest color field is that of red, is of the opinion that the well-known predilection of hysterics for red may be thus explained. Hysteria of an epidemic type occurs among all nations and races. The epidemic type was especially common during the middle ages, and very often furnished the basis for alleged "witch sabbaths." Usually these victims of hysteria had visual, auditory, olfactory and general hallucinations. They had visions of lighted torches, balls of fire, fantastic animals or imaginary personages. Sounds of blasphemies, lascivious words or horrible suggestions rung in their ears. These subjective symptoms were, as Preston remarks, accompanied by convulsions, contractures, loss of consciousness and the like. Similar epidemics under certain conditions of excitement, religious and otherwise, occur from time to time among girls, especially in rural towns.

Some years ago in a small German village two young girls awoke one morning to find their hair had been cut close to their scalp. They related that a person had come in their room during the night and cut their hair. Several girls subsequently experienced the same thing, and finally a young woman who was to be married the next day, lost her hair.

Some of the citizens volunteered to watch the homes of young women. These citizens received anonymous letters that their whiskers would be cut. On the door of a public building was found the following doggerel:

"We are thirty,
At night we're spry,
By day from the pane we spy,
And laugh at the passersby.
Now merely the hair we clip,
Later the head, off we'll snip."

It was shown later that the girls and women had cut off their own hair and indulged in other pranks. The performers had hysteric anesthesia and convulsions.

Hysteric convulsions are usually excited by some sudden emotion or exceptionally by some sudden accumulation of waste material, as in epilepsy and eclampsia. While convulsions of the emotional type are much more frequent among the lower races and the illy trained, the hysteric convulsion due to autointoxication is more frequent among the hysteric non-degenerates of the higher class. Sometimes the motor disturbance of the convulsion is confined entirely to pantomimic expression of emotion, such as wringing the hands, et cetera. As a rule in these conditions there is some muscular rigidity. To some degree the character of the patient modifies the attack. While consciousness is not lost it is somewhat disturbed and the identity of persons around the patient is confused. In the mild type, as Preston remarks, the limbs are under control of the patient's volition. If the patient be lying on her back on the bed or floor she will kick her feet violently and throw her arms about in distinctly purposive manner. Quite often she will seize some one standing near. Efforts at forcible restraint will markedly increase the violence of the movements. As a rule there is no disturbance of the circulation or the respiration. The pulse is not increased more than the active exertion would warrant, and if there be no great physical effort it remains quite normal. The respiration is normal except in certain cases of "hysteric rapid respiration" when it becomes very quick and shallow. The face is neither pale nor congested. There is a peculiar

and rather characteristic quiver of the eyelids when the eyes are closed, which is of considerable diagnostic value. The pupils show no constant or characteristic change. This minor attack may last from a few minutes to several hours, and when it subsides, the patient may be a little depressed or even appear quite normal.

There are no very distinct prodromata although it can usually be traced to some distinct, or seemingly trivial, exciting cause. The first, or epileptoid, period of the hysteric convulsion resembles grand mal, though to this there are numerous exceptions; the patient does not bite the tongue nor in falling does she injure herself. Generally she sees and hears nothing. The eyelids oscillate slightly, but the claim that the patient is usually peeping under eyelids is untrue. The first phase of the epileptoid period is one of rigidity, the arms and legs being usually extended, and the hands clasping the trunk mildly opisthotonic. The breath is arrested and the pulse accelerated. Consciousness is obscured and even lost although not to the extent of epileptic. Usually pressure over the ovaries or the faradic current will arrest the attack. These are, however, exceptions, for in some hysterics, pressure on the hysterogenic zones, such as the abdomen, over the ovaries, and the inside of the thighs may be followed by increased lethargy and unconsciousness. Tourette reports a case of a girl who was seized by the thighs, thrown into lethargy and violated. Mabile has had a similar experience. Brouardel reports the case of a girl of twenty-three who, being raped during an hysteric crisis, became pregnant. Her attacks, which began at the time of her father's death, were typically hysteric, the intellectual powers being in complete abeyance. The case was abandoned by the public prosecutor. The tonic condition is succeeded by the clonic phase. Here the muscles of the face and limbs are thrown into rhythmic movements. Consciousness is considerably blunted. The final phase of the first period is that of resolution. The patient becomes relaxed, lies with head to one side and there is much sialorrhea. In only exceptional cases is there incontinence of urine or feces. Slight sleep may occur.

After a short interval the second period commences, and

because of its extravagant disordered contortions and its seemingly regulated purposive performances it has been called the period of "clownism." The most common movement in this stage is, as J. Hendrie Lloyd points out, the so-called "arc of a circle" in which the patient assumes a position of complete or incomplete opisthotonos. The patient may assume this position lying either on her back or on her side. Other movements of extreme contortion occur. Sauvages applied the term "*hysteria libidinosa*" to cases in which, during convulsion, the patient alternates rapidly from opisthotonos to dorsal decubitus. The most common of the regulated types is, as Lloyd remarks, that called "salutation" in which the patient, lying on her back, suddenly bends the body forward until the head almost touches the knees; this is repeated many times. Others consist in bending and arching the body and flexing and extending the limbs in various ways, rapidly repeated, usually while the patient reclines on her bed. This extreme motor agitation seems to have a mental association or to be the expression of a mental state. Sometimes this mental disorder appears to bystanders to be quite alarming and may seem to have a veritable demoniac element in it. There is no loss of consciousness during the second period. The patient seems to react to some mental stimulus, but there is not the association with delusions and hallucinations that occur in the next period.

The next or third period has been called by Charcot the period of passionate attitudes. In this period Breuer and Freud see the hallucinatory reproduction of a recollection which is full of significance for the origin of the hysteric manifestations. Freud believes that in nearly every case a primary lesion of the sexual emotional sphere exists, dating from puberty. In nearly every case the intimately private nature of the lesion causes it to be carefully hidden and to be forcibly ignored, mentally, by the victim of it. During this third period the patient does not feel pain or touch. The conjunctivæ are insensible. Hearing is lost. The patient is unconscious or oblivious after the attack, although some remembrances of the period may be retained. It is very dangerous, however, to accept such remembrances as facts since the patient may

so remember her sexual emotional state as to ascribe to it an objective origin, for which some one else is responsible. The fourth period has been denominated by Charcot the "period of delire." "Delire" is not synonymous with delirium, but simply indicates an intellectual disturbance which may or may not involve the emotional sphere. Practically this period is the returning to self-consciousness from the previous period of emotional disturbance. During this period, according to Lloyd, the sensory stigmata which are seen in the third stage may persist. Added to them are motor stigmata generally absent before. The most common of these last are various forms of contracture which may persist for days after the seizure. Other motor stigmata sometimes originating in this period and persisting as relics of the convulsion are the several varieties of paralysis and tremor. The mental state may pass into an obstinate mutism or even into trance or lethargy.

Charcot, in 1888, claimed that so-called hysteric unilateral paralysis of the facial, lingual and oculomotor muscles are in reality hemispasms. This view of Charcot was later abandoned by him and his followers. Hitzig, of Halle, Germany, has shown that disorders of the oculomotor mechanisms are comparatively rare in hysteria, though derangements of the visual fields and phenomena due to fatigue are very common. He reports the case of a thirty-six-year-old Polish laborer who had previously suffered from "inflammation of the eyes." He had indulged freely in whisky. In August, 1895, he wounded himself in the leg. The wound healed rapidly, but unfortunately he conceived the idea that as there had been no suppuration, inflammation would occur elsewhere. After a week in reality inflammation appeared in the eyes, followed by diplobia and ptosis. This condition lasted a long time without distressing him, but when he found himself unable to see his children, who had returned home in September, 1896, he attempted suicide by drowning, but for two days appeared insane. On admission (September, 1896) there was complete ptosis on both sides; both eyes were turned inward and downward. Later (in November) the pupil did not react to light and the patient professed to see nothing. There was no evidence of any spasm of the orbicularis muscles.

There was partial unilateral loss of taste and smell. Tactile sensation was absent over the whole body and there was analgesia in the right arm, left leg and left half of the trunk, neck and head. Temporary improvement in the eye symptoms had followed chloroform narcosis in October, but their complete disappearance followed electricity and suggestion in November. A temporary partial hysterical deafness was likewise recovered from. January, 1897, the patient's condition was practically normal in every respect. Some of the eye symptoms were evidently due to spasm, namely, the squinting and the myosis.

Hitzig ascribed these phenomena to hysteric paralysis of the levator muscles of the eyelids. Kiernan reports a case which corroborates that reported by Hitzig. The patient, a thirty-three-year-old married multipara, comes from a family rife with neurotic taint. Neuroses of various types are frequent in this family for three generations. One sister has periodical attacks of nymphomania, whose morbid nature she recognizes and is therefore able to control. The other children suffer from cerebral phenomena from very slight causes. One brother had had infantile hemiplegia with athetoid phenomena. There have been numerous children for three generations, the greater proportion of whom died in infancy. The present patient has visceral neuroses, simulating at times peritonitis and gall-stone colic and attended by pyrexia, followed by apyretic states when the temperature falls from 109° to 90° in a few hours without corresponding constitutional disturbances. Paralysis and local anesthesia are easily produced in this state from suggestion. On one occasion discolorations of the skin resulted from an accidental suggestion that the skin looked slightly reddened at the seat of a paresthesia. The patient had an attack of "visceralgia" simulating gall-stone colic. This left her much exhausted, and in this state the suggestion was made by a neighbor that her eyes looked weak; whereupon slight amblyopia resulted, followed by double ptosis. The "visceralgia" disappeared under what was chiefly moral treatment, but the ptosis persisted for some weeks. One day while the patient was relating her symptoms a window fell and she passed into a hypnotic

state. While in this state the suggestion was made that her ptosis was under full control of her will and that she would hereafter be able to control it. On her awakening from the hypnotic state the ptosis and amblyopia disappeared.

The last attack occurred under the following circumstances: The patient while East had been treated for a headache by the correction of refractive errors with glasses. Soon after her return to Chicago she suffered with a very obstinate suboccipital headache. Through much talk by her friends she was persuaded that this headache was of optical origin and that the glasses had been improperly fitted. She was found to be badly constipated. The persuasion, however, that the eye had been improperly fitted with glasses continued. She finally had a recurrence of the old symptoms of ptosis and amblyopia. This condition, however, disappeared with the disappearance of the headache which yielded very rapidly to dietetic treatment and cathartics. Since this time there has been no return of the ptosis and the patient has not complained of either eye strain or headache.

According to Galezowski, Parinaud and Borel, a true historic myopia or hyperopia may occur. The typical globus hystericus is, in the opinion of Preston, in part at least, a contracture. Some patients describe this peculiar phenomenon as a ball which begins in the region of the stomach and rapidly ascends to the throat. When it has reached the throat it remains a greater or less length of time in that position, rarely the ball seems a very small body in the throat, and again merely a sense of constriction. While perhaps a large part of this phenomenon is purely psychic, and belongs to the category of sensory disturbances, it is probable that there is present more or less contracture of muscle fiber.

Contracture of the bladder with retention of urine is not uncommon. It should be remembered, however, that the bladder is, as Mosso and Pelacani have shown, an even more delicate esthesiometer than the iris and probably the most delicate in the body. Mosso and Pelacani found that contraction of the bladder follows directly on the slightest stimulation of any sensory nerve, and also that all the varying conditions of the organism which raise the blood pressure and

excite the respiratory centers produce an immediate and measurable effect upon the bladder. These investigators found by experiments upon several young women that when a plethysmograph was brought into connection with the bladder, even a slight touch with the finger on the back of the subject's hand produced a noticeable contraction of the bladder, and whenever the subject spoke or was spoken to, or made the slightest mental exertion, there was a similar contraction. These reactions are much more delicate than those of the blood-vessels and cannot be paralleled by any other part of the organism. The bladder, as Born puts it, is the mirror of the soul; it would be equally correct to say that to some extent the soul is the mirror of the bladder. The fainter vesical contractions cannot be said to play a recognizable part in emotion, but when they attain a somewhat higher degree of intensity they form a well-recognized part. "A nervous bladder," as Goodell puts it, "is one of the earliest symptoms of a nervous brain." Contraction of the bladder plays a part in the constitution of various emotional states of fear, anxiety and suspense.

In regard to the diagnosis of hysteria it must be remembered that hysteria bears the same relation to neurasthenia that parietic dementia does to locomotor ataxia, that is to say, hysteria is the cerebral type of a neurosis, the spinal symptoms of which are commonest in neurasthenia. Since hysteria may be produced by any condition causing nervous disorder or disease, it may complicate every one of the great neuroses, as well as the great constitutional disorders. It may occur as a temporary expression of conditions of autointoxication or during the period of nervous adynamia after exhausting diseases. When it occurs in degenerate organisms or, more properly, in organisms hereditarily defective, the disorder will be peculiarly protracted and the nerve symptoms will simulate organic diseases to a marked degree. It is obvious, therefore, that in diagnosis the underlying state of the hysteric has to be taken into consideration.

In regard to treatment it must be remembered that as hysteria is fostered by psychic influences, like sympathy and conditions producing introspection, removal from the home

environment and from contact with relatives, especially husband, father, mother, sisters, or brothers, is imperative. Treatment under other conditions would simply be the removal of symptoms and not the destruction of the underlying neuroses which constitutes hysteria. So far as surgical treatment is concerned, it must be admitted that any source of irritation, whether in the eyes, ears, nose, throat or genitalia should be removed. The morbid mentality of the hysteric will center around any local irritation, psychoneurotic symptoms of tenfold the seeming gravity of the affection. It should be remembered that the underlying neurosis may aggravate every one of these local irritations, even including refraction defects.

Regarding medicinal treatment the conscious or unconscious sexual factor in hysteria requires regulation. Here camphor monobromate will be found of value, but the psycho-sexual element must be diverted into healthier channels by a course of reading, literature and science. The rest cure treatment, as ordinarily carried out, in the homes of laymen especially, is a failure since the psychic element is completely neglected and introspection, which is the great danger of the hysteric, is encouraged. Very frequently to the hysteric state it adds obsession and imperative conceptions of a protracted obstinate type. The hysteric should be drawn out of herself, but the ordinary rest cure drives her into herself, the patient's attention being too much concentrated on herself by it. The error is often made that a fattened hysteric is a cured hysteric. The fact is forgotten that lipomatosis is a product of suboxidation as morbid as rheumatism or gout. What the hysteric needs is not fat but increased powers of the higher inhibitions. The rest cure, therefore, which neglects this factor is worse than useless. It can never be carried out properly unless under direct supervision of the physician.

As far as the forensic aspects of hysteria are concerned, it must be remembered that the hysteric may commit atrociously brutal crimes without consciousness of their brutality. Many of the poisonings of whole families by servant girls in their teens are of this nature. Brinvilliers, the famous poisoner of France, had the usual hysteric combination of extreme

piety and atrocious implacability regarding others. The physician and the clergyman are often the victims of hysteric accusations, sometimes forced by the jealousy of a drunken husband, since alcohol in excess peculiarly tends to create, as Kiernan, Spitzka and others have shown, morbid jealousy of a strongly marked delusional type. For the acceptance of such delusions the psychosexuality of the hysteric is a peculiarly fertile soil. In examination of hysterics, therefore, especially the hysteric wives of drunkard husbands, the physician cannot exercise too great caution.

In conclusion, the fact cannot be too strongly emphasized that hysteria is a grave constitutional neurosis with serious forensic and sociologic consequences, which may yield to treatment, if dealt with as a constitutional neurosis, but will only be aggravated by treatment of its symptoms.

ASCETICISM AS AN AUTO-EROTISM.

BY JAS. G. KIERNAN, M. D.,

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CONCEPTION of the psychic and the physical is too often absolute, not relative. Sex is usually regarded as purely physical despite its psycho-physiologic and psycho-pathologic phases forced on medical and sociologic attention. Albeit Christ held up as an ideal the beautiful sex-love he summarized, as between man and wife into the fact they twain shall be one flesh, yet dogmatic Christianity partly from Oriental asceticism, partly from contempt for woman due to this, partly from a mystic exaggeration due to Eve's sin, partly from an antisocial trend due to persecution (which cropped up later in the Covenanters)¹ debased woman until the rise of the Madonna cult. Such "Christianity" taught earthly residence was of no account,² later taxed with impurity sexual unions outside of sacramental marriage³ and made the mystic union of monk and nun with God an ideal.

The preachers who at one time ardently urged the severing of family ties as inexorably demanded by religion, were later seen proclaiming from their pulpits with the same appeal to religion a totally different doctrine⁴ and inculcating mortification of the flesh of quite a novel kind.⁵ Of this the story of the "Excellent pharmacist at Pau who never had anything to do with his wife except in 'Holy Week' by way of penance" is a fair sample.

1. David Deans: Heart of Midlothian.

2. Ellis: Psychology of Sex.

3Before the Council of Trent "spousales pro verba futuro" or betrothal, was as James Watts (The Law's Lumber Room, Vol. II.), shows, recognized when consummated, as marriage by the canon law.

4De Maulde: Women of the Renaissance.

5Heptameron.

The newly fledged husband (of the Middle Ages), remarks de Maulde, was under no illusion in the matter; he had married to cure himself of love, or rather to have done with it forever, to turn away from women and toward higher things. He would never have imagined any connection between his marital duties and his soul. First and last wedlock had no romance for him. Marriage was the worn and dusty highway of materialities. Nor did the expectations of the young girl soar any higher. Shown the simple truth by the solemn personages to whom she owed her upbringing, she knew all there was to know about her new duties and in regard to these it was thought peculiarly necessary to arm her against errors and enthusiasms that might bring disappointment in their train. Marriage she had always looked upon as a natural function with excellent precedents and she had studied its rules in their rudiments, at least so as to be able to guide her steps intelligently in a career that had necessarily its technical side.

This was why Champier, the physician, compiled expressly for Suzanne de Bourbon a little treatise quite foreign in its nature to what in these days is called "literature for young people." Yet it must be confessed that this treatise, frankly physiological as it is, constituted the best imaginable safeguard against being swept away on a flood-tide of passion and folly. Champier (who was cloister bred) lays down as rigorously as though stating an astronomical law, various rules for his lady's guidance in the most intimate relation of married life. Prudence, moderation and regularity are his texts and he gives point to his precept by setting against them a menacing array of human ills—gout, anemia, dyspepsia, sight enfeeblement.

Such prosaic conception of marriage (still remaining in the religious bourgeois) determines the coarse ideal of marital sex-love altogether too prevalent, yet from which romantic love evolved through simple psychic processes.

Were, remarks Maudsley,⁶ man robbed of the instinct of procreation, and of all that spiritually springs therefrom, that moment would all poetry, and perhaps, also, his whole moral sense, be obliterated from his life.

⁶Physiology of the Mind.

The relation, remarks Krafft-Ebing⁷ speaking of masochism, is not of such a nature that what causes physical pain is simply perceived as physical pleasure, since the person in a state of masochistic ecstasy feels no pain either by reason of his emotional state (like the soldier in battle), the physical effect on his cutaneous nerves is not appreciated, or because (as with religious martyrs and enthusiasts) in the preoccupation of consciousness with sexual emotion, the idea of maltreatment remains merely a symbol without its quality of pain. To a certain degree there is over compensation of physical pain in psychic pleasure and the excess remains in consciousness as psychic lust. This also undergoes an increase, since either through reflex spinal influence or through a peculiar coloring in the sensorium of sensory impression, a kind of hallucination of bodily pleasure takes place with a vague localization of the objectively projected sensation. In the self-torture of religious enthusiasts, fakers, howling dervishes, religious flagellants, there is an analogous state only with a difference in the quality of feeling. Here the conception of martyrdom is also apperceived without its pain, for consciousness is filled with the pleasurable colored idea "of serving God, atoning for sin, deserving heaven, etc."⁸ Some two decades ago I said in ethical aspect of the subject, its evolution demonstrates a hope, timidly expressed by Tennyson:

O, yet we trust that somehow good
Will be the final goal of ill—
To pangs of nature, sins of will,
Defects of doubt and taints of blood.

Between the cannibalistic sexual intercourse, the expression of protoplasmic hunger in the amœba, and the picture drawn by Finch and Maudsley, looms a seemingly impassable gap, yet evolution has, as demonstrated by perversionary atavisms, bridged this gap, and from and by what would, *a priori*, seem the utmost expression of egotism, has developed a secondary "ego," which inhibits explosive egotism, and hence is an efficient moral factor.

The elements of this evolution are two seemingly diverse,

⁷Psychopathia Sexualis.

⁸Alienist and Neurologist, 1891.

really complementary mental states. Pain, not cruelty, is essential in this group of manifestations. The masochist, or passive algophilist, desires pain that as a rule must be inflicted in love; the sadist desires to inflict pain, but often seeks that it should be felt as love. This relationship was anticipated by me. "Every attempt," according to Krafft-Ebing,⁹ "to explain sadism or masochism, owing to the close connection of the two phenomena, must likewise fit the other perversion. An explanation of sadism by J. G. Kiernan meets this requirement. Kiernan, who cites several Anglo-American authorities, starts from the position of certain naturalists (Dallinger, Rolph, Cienkowski), who conceive so-called sexual conjugation in certain low forms of animal life to be cannibalism, a devouring of the partner. Kiernan brings into immediate connection with this the facts that at coitus crabs tear limbs from their bodies, female spiders bite off the heads of the males, and other sadistic acts are performed by rutting animals with their consorts. From this he passes to lust murder and other lustful acts of cruelty in man, and assumes that hunger and the sexual appetite are in their origin identical, that the sexual cannibalism of lower forms of animal life has an influence in higher forms and in man, and that sadism is an atavism. This explanation of sadism would likewise explain masochism, since if the origin of desire must be sought in cannibalistic processes, then both the survival of one sex and the destruction of the other fulfil the purpose of nature, and thus instinctive desire to be the victim is explained."

There is, as Havelock Ellis¹⁰ shows, on the whole a point of difference. In that abnormal active algophily which appears from time to time among civilized human beings, it is nearly always the female who becomes the victim of the male. But in the normal algophily which occurs throughout a large part of nature, it is nearly always the male who is the victim of the female. It is the male spider who impregnates the female at the risk of his life, and sometimes perishes in the attempt; it is the male bee who, after intercourse with the queen, falls dead from that fatal embrace, leaving her to fling aside his entrails and calmly pursue her course. In the chapter

⁹*Psychopathia Sexualis.*

¹⁰*Psychology of Sex, Love and Pain.*

on the "Nuptial Flight" of his book on the Bee, Maeterlinck has pictured this tragic courtship. A certain semblance of cruelty in man in his relations with women is but a very slight counterpoise to that cruelty which has been naturally exerted by the female on the male long before man began to be. These seemingly pure atypic sexual states are but exaggerations of conditions normal in type.

Stefanowsky,¹¹ dealing with the problem from a later phase in evolution remarks: "The combat between males, and the court paid to females, furnish the explanation of passivism. Sadism may be regarded as having its origin in the combat, for the female, and passivism as a pathological exaggeration of the court paid the female to gain her favor. According to the sagacious remark of Tillier, combat, and the court which accompanies, follows or precedes it, have for end and result, in the animals which wish to couple (and in man also), a sexual excitation favorable to fecundation. Here is to be found the solution of the enigma."

Fetichism is the term applied by Binet¹² to objects which have an erotic influence as nearly symbolic as the fetich, charm, or mascot of primitive man or the dolls of children. There is in pure fetichism an expression of perverted association where evolution is reversed, with return to the incoherent homogeneous from the complex heterogeneous. "Normal love," according to Ludwig Brunn,¹³ is "a symphony of tones of all kind—results from various stimuli. Fetichism appreciates the tone of but a single instrument and results from but one stimulus." The fetichist is a man with one predominant sense. Fetichism may be a predominant note in normal sexual desire, in inverted desire, in auto-erotism of the Narcissus type,¹⁴ or may be an expression of algophily.

In the chivalric love of the middle ages this fetichism appears. The "favors" given by fair ones were both¹⁵ "tokens

11Arch. de L'Anthrop. Crim., 1892.

12Etudes de Psychologie Experimentale.

13Deutsche Montgschrift, Aug. 20, 188 .

14Ellis: Psychology of Sex: Auto-Erotism.

15Essays on Chivalry.

of remembrance," and sexual excitants of satisfaction. Sir Walter Scott significantly says anent these, "In the attack made by Buckingham on the Isle of Rhe, 'favors' were found upon the corpses of many French soldiers, but for the manner in which they were disposed we are compelled to refer to Howell and Wilson." They were arranged around the sexual organs.

"There are," remarks Havelock Ellis,¹⁶ "several very various, yet very typical manifestations, in all of which it is not difficult to see how in some strange and eccentric form—on a basis of association through resemblance or contiguity, or both combined—there arises a definite mimicry of the normal sexual act and of the normal emotions which accompany that act. It has become clear in what sense erotic symbolism is justified."

The symbolic, and as it were abstracted nature of these manifestations is shown by the remarkable way in which they are sometimes capable of transference from the object to the subject. That is to say that the fetichist may show a tendency to cultivate his fetich in his own person. A foot fetichist may like to go bare-foot himself; a man who admired lame women liked to halt himself; a man who was attracted by small waists in women found sexual gratification in tight-lacing himself; a man who was fascinated by fine white skin and wished to cut it, found satisfaction in cutting his own skin; Moll's¹⁷ coprolagnic fetichist found a voluptuous pleasure in his own defaecation.

Such symbolic transference seems to have a profoundly natural basis for a somewhat similar phenomenon occurs in the tendency of cows to mount a cow in heat. This would appear to be, not so much a homosexual impulse, as the dynamic psychic action of an olfactory sexual symbol in a transformed form. Here seems a psychic process, a curious reverse of that process of *Einfuhlung*—the projection of one's own activities into the object contemplated—which T. Lipps has so fruitfully developed as the essence of every aesthetic condition. By *Einfuhlung*, our own interior activity becomes the activity of the object perceived, a thing being beautiful

¹⁶Psychology of Sex: Auto-Erotism.

¹⁷Libido Sexualis.

in proportion as it lends itself to our *Einfühlung*. But by this action of erotic symbolism, on the other hand, we transfer the activity of the object into ourselves.

When the idea of erotic symbolism as manifested in such definite typic forms becomes realized, it further is clear that vaguer manifestations of such symbolism are exceedingly widespread. The various threads which unite "Love and Pain," stand throughout on the threshold of erotic symbolism. Pain itself—in the sense used in this relationship—as a state of intense emotional excitement—may under a great variety of special circumstances become an erotic symbol and afford the same relief as the emotions normally accompanying the sexual act. Active algolagnia or sadism is thus a form of erotic symbolism; passive algolagnia or masochism is (in a man) an inverted form of erotic symbolism. Active flagellation or passive flagellation are, in exactly the same way, manifestations of erotic symbolism, the imaginative mimicry of coitus.

Binet and also Krafft-Ebing¹⁸ have argued in effect that the whole of sexual selection is a matter of fetichism, that is to say of erotic symbolism of object. "Normal love," Binet states, "appears as the result of a complicated fetichism." Tarde¹⁹ regards love as normally a fetichism. "We are a long time before we fall in love with a woman," he remarks, "we must wait to see the detail which strikes and delights us, and causes us to overlook what displeases us. Only in normal love the details are many and always changing. Constancy in love is rarely anything else but a voyage around the beloved person, a voyage of exploration and ever new discoveries. The most faithful lover does not love the same woman in the same way for two days in succession."

From that point of view normal sexual love is the sway of a fetich—more or less arbitrary, more or less (as Binet terms it) polytheistic—and it can have little objective basis. Beauty has to a large extent an objective basis and love by no means depends simply on the capricious selection of some

¹⁸Binet: *Etudes de Psychologie Experimentale*, esp. p. 84; Krafft-Ebing, *Op. cit.* p. 18.

¹⁹G. Tarde: "L'Amour Morbide," *Archives de l'Anthropologie Criminelle*, 1890, p. 585.

individual fetic. The individual factor is but one of many factors which constitute beauty. It is often a factor of great importance, for in it are rooted all these outgrowths—normal in their germs, highly abnormal in their more extreme developments—which make up erotic symbolism.

Erotic symbolism is therefore concerned with all that is least generic, least specific, all that is most intimately personal and individual in sexual selection. It is the final point in which the decreasing circle of sexual attractiveness is fixed; in the widest and most abstract form sexual selection in man is merely human, and we are attracted to that which bears most fully the marks of humanity; in a less abstract form it is sexual, and we are attracted to that which most vigorously presents the secondary sexual characteristics; still narrowing, it is the type of our own nation and people that appeals most strongly to us in matters of love; and still further concentrating we are affected by the ideal—in civilization most often the somewhat erotic ideal—of our own day, the fashion of our own city. But the individual factor still remains, and amid the infinite possibilities of erotic symbolism the individual may evolve an ideal which is often, as far as he knows and perhaps in actuality, an absolutely unique event in the history of the human soul.

Erotic symbolism works in its finer manifestations by means of the idealizing aptitudes; it is the field of sexual psychology in which that faculty of crystallization, on which Stendhal loved to dwell, achieves its most brilliant results. In the solitary passage in which seems a smile on the face of the austere poet, Lucretius²⁰ tells how every lover, however he may be amused by the amorous extravagances of other men, is himself blinded by passion; if his mistress is black she is a fascinating brunette, if she squints she is the rival of Pallas, if too tall she is majestic, if too short she is one of the Graces, the *merum sal*, if too lean it is her delicate refinement, if too fat then a Ceres, dirty and she disdains adornment, a chatterer and brilliantly vivacious, silent and it is her exquisite modesty.

Sixteen hundred years later Robert Burton,²¹ when de-

²⁰Lucretius: Lib. IV., vv. 1150-1163.

²¹Burton: *Anatomy of Melancholy*. Part III., Sect. II. Mme. III. Subs. 1.

scribing the symptoms of love, made out a long appalling list of the physical defects the lover is prepared to admire.

Yet it is not too certain that the lover is wrong in this matter. We too hastily assume that the casual and hasty judgment of the world is necessarily more reliable, more conformed to what we call "truth," than the judgment of the lover, which is founded on absorbed and patient study. In some cases where there is lack of intelligence in the lover and dissimulation in the object of his love, it may be so. But even a poem or a picture will often not reveal its beauty except by the expenditure of time and study. It is foolish to expect that the secret beauty of a human person will reveal itself more easily. The lover is an artist, an artist who constructs an image, it is true, but only by patient and concentrated attention to nature; he knows the defects of his image, probably better than anyone, but he knows also that art lies, not in the avoidance of defects, but in the realization of those traits which swallow up defects and so render them non-existent. A great artist, Rodin,²² after a life spent in the study of Nature, has declared, that for art there is no ugliness in Nature. "I have arrived at this belief by the study of Nature," he said, "I can only grasp the beauty of the soul by the beauty of the body, but some day one will come who will explain what I only catch a glimpse of and will declare how the whole earth is beautiful, and all human beings beautiful. I have never been able to say this in sculpture so well as I wish and as I feel it affirmed within me. For poets Beauty has always been some particular landscape, some particular woman; but it should be all women, all landscapes. A negro or a Mongol has his beauty, however remote from ours, and it must be the same with their characters. There is no ugliness. When I was young, I made that mistake, as others do; I could not undertake a woman's bust unless I thought her pretty, according to my particular idea of beauty; to-day I should do the bust of any woman, and it would be just as beautiful. And however ugly a woman may look, when she is with her lover

²²Judith Cladel, *Auguste Rodin Pris sur la Vie*, 1903, pp. 103-104. Some slight modifications have been made in the translation of this passage on account of the conversational form of the original.

she becomes beautiful; there is beauty in her character, in her passions, and beauty exists as soon as character or passion become visible, for the body is a casting on which passions are imprinted. And even without that, there is always the blood that flows in the veins and the air that fills the lungs."

The saint is here at one with the lover and the artist. The man who has so profoundly realized the worth of his fellow men that he is ready even to die in order to save them, feels that he has discovered a great secret. Cyples²³ traces the "secret delights" that have thus risen in the hearts of holy men to the same source as the feelings generated between lovers, friends, parents and children. "A few have at intervals walked in the world," he remarks, "who have, each in his own original way, found out this marvel. . . . Straight-way man in general has become to them so sweet a thing that the infatuation has seemed to the rest of their fellows to be a celestial madness. Beggars' rags to their unhesitating lips grow fit for kissing, because humanity had touched the garb; there were no longer any menial acts, but only welcome services. . . . Remember by how much man is the subtlest circumstance in the world; at how many points he can attach relationships; how manifold and perennial he is in his results. All other things are dull, meagre, tame beside him."

Even if lover, artist and saint are drawing the main elements of their conceptions from the depths of their own consciousness there is a sense in which they are coming nearer to the truth of things than those for whom their conceptions are mere illusions. The aptitude for realizing beauty has involved an adjustment of the nerves and the associated brain centres through countless ages that began before man was. When the vision of supreme beauty is slowly or suddenly realized by anyone, with a reverberation that extends throughout his organism, he has attained to something which for his species, and for far more than his species, is truth, and can only be illusion to one who has artificially placed himself outside the stream of life.

²³*The Process of Human Experience*, p. 462. Even if the saint cannot always feel actual physical pleasure in the intimate contact of humanity, the ardour of devoted service which his vision of humanity arouses remains unaffected.

In his "The Gods as Apparitions of the Race-Life," Edward Carpenter, in somewhat platonic phraseology, states the matter: "The youth sees the girl; it may be a chance face, a chance outline, amid the most banal surroundings. But it gives the cue. There is a memory, a confused reminiscence. The mortal figure without penetrates to the immortal figure within; and there rises into consciousness a shining Form, glorious, not belonging to this world, but vibrating with the age-long life of humanity, and the memory of a thousand love-dreams. The waking of this vision intoxicates the man; it glows and burns within him; a goddess (it may be Venus herself) stands in the sacred place of his Temple; a sense of awe-struck splendor fills him; and the world is changed." "He sees something" (the same writer continues in a subsequent essay, "Beauty and Duty") "which, in a sense, is more real than the figures in the street, for he sees something that has lived and moved for hundreds of years in the heart of the race; something which has been one of the great formative influences of his own life, and which has done as much to create those very figures in the street as qualities in the circulation of the blood may do to form a finger or other limb. He comes into touch with a very real Presence or Power—one of those organic centres of growth in the life of humanity—and feels this larger life within himself, subjective, if you like, and yet intensely objective. And more. For is it not also evident that the woman, the mortal woman who excites the Vision, *has* some closest relation to it, and is indeed far more than a mere work or empty formula which reminds him of it? For she indeed has within her, just as much as the man has, deep subconscious Powers working; and the ideal which has dawned so entrancingly on the man is in all probability closely related to that which has been working most powerfully in the heredity of the woman, and which has most contributed to mould *her* form and outline. No wonder, then, that her form should remind him of it. Indeed, when he looks into her eyes he sees *through* to a far deeper life even than she herself may be aware of, and yet which is truly hers—a life perennial and wonderful. The more than mortal in him beholds the more than mortal in her; and the gods descend to meet."²⁴

²⁴Art of Creation.

It is this mighty force which lies behind and beneath sexual aberrations, a great reservoir from which they draw the life-blood that vivifies even their most fantastic shapes. Fetichism and the other forms of erotic symbolism are but the development and the isolation of the crystallizations which normally arise on the basis of sexual selection. Normal in their basis, in their extreme forms they present the utmost pathological aberrations of the sexual instinct which can be attained or conceived. In the intermediate space all degrees are possible. In the slightest degree the symbol is merely a specially fascinating and beloved feature in a person who is in all other respects felt to be lovable; as such its recognition is a legitimate part of courtship, an effective aid to tumescence. In a further degree the symbol is the one arresting and attracting character of a person who must, however, still be felt as a sexually attractive individual. In a still further degree of perversion the symbol is effective, even though the person with whom it is associated is altogether unattractive. In the final stage the person and even all association with a person disappear altogether from the field of sexual consciousness; the abstract symbol rules supreme.

Long, however, before the symbol has reached that final climax of morbid intensity we may be said to have passed beyond the sphere of sexual love. A person, not an abstract quality, must be the goal of love. So long as the fetich is subordinated to the person it serves to heighten love. But love must be based on a complexus of attractive qualities, or it has no stability.²⁵ As soon as the fetich becomes isolated and omnipotent, so that the person sinks into the background as an unimportant appendage of the fetich, all stability is lost. The fetichist now follows an impersonal and abstract symbol whithersoever it may lead him.

There are an extraordinary number of forms in which erotic symbolism may be felt. The links that bind together the forms of erotic symbolism are not in objects or even in acts but in the underlying emotion. A feeling is the first

²⁵"To love," as Stendhal defined it (*de l' Amour*, Ch. II,) "is to have pleasure in seeing, touching, and feeling by all the senses, and as near as possible, a beloved object by whom one is oneself loved."

condition of the symbol, a feeling which recalls, by a subtle and unconscious automatic association of resemblance or of contiguity, some former feeling. It is the similarity of emotion, instinctively apprehended, which links on a symbol only partially sexual, or even apparently not sexual at all, to the great central focus of sexual emotion, the great dominating force which brings the symbol its life-blood.²⁶

The sexual hyperaesthesias present in a morbidly comprehensive sensitive form possibilities of erotic symbolism which in some degree or at some period are latent in most persons. They are genuinely instinctive and automatic and have nothing in common with that fanciful and deliberate play of the intelligence around sexual imagery—not infrequently seen in abnormal and insane persons—which has no significance for sexual psychology.

To the extreme individualization involved by the developments of erotic symbolism the fetishist owes his morbid perilous isolation. The lover who is influenced by all the elements of sexual selection is always supported by the fellow-feeling of a larger body of other human beings; he has behind him his species, his sex, his nation, or at the very least a fashion. Even the inverted lover in most cases is soon able to create around him an atmosphere constituted by persons whose ideals resemble his own. But it is not so with the erotic symbolist. He is nearly always alone. He is predisposed to isolation from the outset for it would seem to be on a basis of excessive shyness and timidity that the manifestations of erotic symbolism are most likely to develop. When at length the symbolist realizes his own aspirations—which seem to him for the most part an altogether new phenomenon in the world—and at the same time realizes the wide degree in which they deviate from those of the rest of mankind, his natural secretiveness is still further reinforced. He stands alone. His most sacred ideals are for all those around him a childish absurdity, or a disgusting obscenity, possibly a matter calling for the intervention of the policeman. We have forgotten that all these impulses which to us seem so unnatural—this

²⁶ Pilon's study of "La Memoire Affective" (*Revue Philosophique*, Feb., 1901), helps to explain the psychic mechanism of the process.

adoration of the foot and other despised parts of the body, this reverence for the acts of urination and defaecation, the acceptance of congress with animals, the solemnity of self-exhibition—were all beliefs and practices which to our remote forefathers were bound up with the highest conceptions of life and the deepest ardors of religion.

A man cannot, however, deviate at once so widely and so spontaneously in his impulses from the rest of the world in which he himself lives without possessing an aboriginally abnormal temperament. At the very least he exhibits a neuropathic sensitiveness to abnormal impressions. Not infrequently there is more than this, the distinct stigmata of degeneration, sometimes a certain degree of congenital feeble-mindedness or a tendency to insanity.

Yet, regarded as a whole, and notwithstanding the frequency with which they witness to congenital morbidity, the phenomena of erotic symbolism can scarcely fail to be profoundly impressive to the patient and impartial student of the human soul. They often seem absurd, sometimes disgusting, occasionally criminal; they are always, when carried to an extreme degree, abnormal. But of all the manipulations of sexual psychology, normal and abnormal, they are the most specifically human. More than any others they involve the potently plastic force of the imagination. They bring before us the individual man, not only apart from his fellows but in opposition, himself creating his own Paradise. They constitute the supreme triumph of human idealism.

The sexual symbolism of active flagellation is very closely analogous to symbolism of exhibitionism. The flagellant approaches a woman with the rod (itself a symbol of the penis, and in some countries bearing names which are also applied to that organ) and inflicts on an intimate part of her body the signs of blushing and the spasmodic movements which are associated with sexual excitement, while at the same time she feels, or the flagellant imagines that she feels, the corresponding emotions of delicious shame.²⁷

²⁷The symbolism of coitus involved in flagellation has been touched on by Eulenberg, (*Sexuale Neuropathie*, p. 121) and is more fully developed by Dauhren (*Geschlechtsleben in England*, Bd. II, pp. 366 et seq.)

Pleasure is experienced in the mild shock of interested surprise and injured modesty which this vision was imagined to cause to a young girl. It would thus be a form of psychic defloration.

Subjectivism or passive algolagny or passive algophily has evolved along the psychic lines I pointed out two decades ago²⁸ when I showed that as the phenomena of sexual selection demonstrate, a complex mental state has resulted from the evolution of the simple search for physical sexual means of satisfying protoplasmic hunger. These sexual selection phenomena show that pleasure has ceased to be dependent on simple sexual conjugation, since ideas of beauty, of attraction to the most beautiful, and of maternal love, have evolved from the sexual desire of satisfying protoplasmic hunger. Thus have been developed inhibitions on explosive sexual performances which tended to restrain egotism evident in the purely sexual propensity. Hence pleasure associated with conjugation with a given subject arose on sight of that subject, and sexual pleasure evinced itself in attempts to please the cause. These repressed explosive manifestations of the sexual appetite thus producing more intellectual and less obvious physical enjoyment of sexual society. By an ordinary law of mental association, attempts to please the cause of sexual pleasure, in themselves finally pleased without the presence of the cause. Thus developed romantic love which restrained egotism, and restraints on egotism constitute the basis of morality. A secondary "ego" was thus developed, which when stimulated by favoring conditions, began, by a process that Ribot has pointed out,²⁹ to overwhelm and occupy the place of the primary "ego." The subjectivism of the primary to the secondary "ego," thus dominant became the acme of sexual gratification. "Metaphysical romances" and "metaphysical gallantry," are evidences of the power subjectivism gained under chivalry, and even now subjectivism (passivism) is somewhat unduly eulogized in fiction. The sexual teachings of Tolstoi are an expression of subjectivism. Gibbon³⁰ brings forth no little

²⁸*Alienist and Neurologist*, April, 1891.

²⁹*Diseases of the Personality*.

³⁰*Decline and Fall of the Roman Empire*.

evidence to show that it underlay the excessive desire for martyrdom of certain early Christians. Sir Walter Scott³¹ has portrayed many instances either with subsequent sexual intercourse as a reward, or to find such satisfaction in the task itself. He cites the "Golden Thread," in which a page is described who opens his breast to deposit near his heart a golden thread given by his adored one. Here fetichism is associated with subjectivism.

Armand Sylvestre says anent Levy's "Circe" exhibited in the Salon of 1889:

The ecstasy of martyrdom is more intense than the blood lust of the sworn tormentor. Annihilation by the power of beauty is in itself a voluptuous ecstasy. Who envies not Anthony dying in the arms of Cleopatra, through whom his death had come?

Passive and active algolagny, as Slefanousky remarks, while extremes, touch. The first delights in receiving, the second in inflicting pain. One is the ecstasy of the martyr, the other pain volupty of the sworn tormentor.

As I pointed out³² nearly three decades ago the relations between religiosity, sexuality and mutilation have long been recognized by alienists. An aberrant tendency of this religio-sexual order finds expression in religious sects. Examples of mutilation practiced are by no means infrequent among the religious insane. A tailor³³ who removed both testicles with his finger-nails and perfectly recovered from the injury. In another case³⁴ a sexo-religious lunatic opened his abdomen with a rusty penknife. Having recovered he removed first one testicle and then the other. It would appear that in certain cases lust, as remarked by Montaigne ("Essays") finds zest and stimulation in pain. This seeking for pain as stimulus, is, it is by no means improbable, an atavism, since certain animals cannot copulate without pain. In most religio-sexual lunatics the mutilation is referred to remorse or a desire to avoid temptation; but, in many cases, the most probable explanation is that just given from Montaigne."

³¹Essays on Chivalry and Romance.

³²Jour. of Nerv. and Ment. Diseases, 1882.

³³Arch. of Neur., 1882.

³⁴Langenbeck's Arch., 1869.

Sedillot³⁵ calls attention to the fact that mutilation has been used during coitus to intensify sexual pleasure. Demarquay³⁶ has reported the case of a masturbator who pierced his scrotum in order to stimulate his fading sexual pleasure. A most extraordinary case is reported by Chopart.

A man began masturbation from the age of fifteen, and masturbated eight times a day. The ejaculation of semen at length became so rare and difficult that he tired himself an hour before obtaining it. He used his hand merely in masturbation until the age of twenty-six, when manipulation only brought about priapism, whereupon he began titilating the urethra with a rough piece of wood. At length the urethral canal became hard, callous and absolutely insensible. The patient had an insuperable objection to women, and enforced abstinence having produced continual erections, he became desperate and drew a dull knife through the glans along the urethral canal. This incision, which would have usually caused intense pain, produced in him an agreeable sensation, followed by an ejaculation. He repeated this until he had divided, after a thousand trials, the penis into two halves. The corpus cavernosa, although divided, often was capable of erection, and diverged to the right and left. As the section of the penis extended to the pubis, the knife could not be used further. A piece of wood was then tried for ten years, which finally slipped into the bladder, and required perineal section, which resulted in septicæmia and death.

The same tendency appears in females. Poulet cites the case of a married mother of three children, who was not gratified by coitus, but practiced masturbation with a rough, blunt piece of wood tied to a wire. This slipped into her bladder, whereupon the whole story was disclosed. The following case of mine has elsewhere been cited:

The patient has "strong spells of secret love," when she smashes windows to feel "happy" from seeing the "blood run" from her cut fingers. These are evidently erotic attacks. She uses obscene language if she cannot smash glass and see the blood run.

35"Contributions a la Chirurgie."

36Poulet's "Foreign Bodies."

Another case under my care was as follows:

The patient would hack herself all over with any sharp instrument she could lay her hands on—not for suicidal purpose.

In a case in which I was consulted by an Iowa physician the patient was a seventy-year-old man, who had never felt strong sexual attraction to females, albeit their society is agreeable. Strong men or boys excite him when the idea of corporeal punishment inflicted on their nates occurs to him. At the age of six he felt a peculiar pleasure in throwing little girls down and spanking their nates. He slept with an older boy who, at the age of ten taught him to masturbate. The two practiced it morning and night, exciting themselves with lascivious stories. His companion delighted in the narration of intrigues, and he in having the intriguer caught and whipped on the nates. At the age of sixteen he became aware of the evil effects of masturbation, but repeated attempts to quit resulted in severe balanitis after a week. He married young, and found satisfaction in coitus, but this was greatly augmented if he thought of nude, well-developed men or boys being whipped. A naked boy or man excites him sexually more than a woman. He is not a pæderast, but might have become one had opportunity served. He had been dissuaded from flagellation, which he believed might have been pleasurable.

The development of any psychic or pathologic state depends on the etiologic moment.

The etiologic moment consists of the inborn constitution of the individual, the state of that constitution when the exciting cause is applied and the character of the exciting cause; translating etiologic into psychologic terms, this law holds good with all mental states. It is certainly true that given causes will produce certain effects just as true as that a match will produce an explosion but it makes a great difference whether the match be lighted and be thrown into gasoline, kerosene, gunpowder, or the sea. So it makes a great difference whether a given mental shock makes its impact on a given cerebral spinal system at a given time or not.

The auto-erotic influence of asceticism is dependent, not on asceticism alone, but likewise on the constitution to which

it is applied and the circumstances of its application. This factor is ignored by Havelock Ellis³⁷ when he remarks that: "There is by no means a necessary connection between flagellation and the sexual emotions (this, of course, is undeniable), but an obvious error appears in the corollary that if there were, this form of penance would not have so long been approved and tolerated by the church. As a matter of fact there seems to be no good reason to suppose that sexual excitement has been a common result of flagellation when applied with a religious object."

Here Ellis ignores the fact that erotic symbolism is regarded as anything but sexual excitement unless it takes an obviously sexual expression. Furthermore the relations between religiosity and sexuality are ignored. Excessive spirituality (according to a sermon of Spurgeon, preached 30 years ago) is, by a strange yet natural law, placed next door to sensuality. Closely connected with salacity, remarks Havelock Ellis,³⁸ is religious excitement as also is ecstasy. Religious ecstasy, according to Krafft-Ebing,³⁹ lacks nothing of what makes up sexual love, not even jealousy. Religious and sexual emotional states at the height of their development have, according to Havelock Ellis,³⁹ a harmony in quantity and quality which can act vicariously. The resultant states have been termed religiosity.⁴⁰ Love in pain (algophily) or sexual excitement from pain (aloglagny), may, as I pointed out a decade ago,⁴¹ be an expression of this. Algophily or aloglagny of the passive type, pain to self, may be an expression of this in flagellation or mutilation. Of the last the Skoptzi sect of Russia are an illustration.

Skoptzi means "castrated." They call themselves "White Doves." They arose about 1757 from the Kallish or flagellants. Paul I. caused Sseliwanow, the founder, to return from Siberia, and after an interview, sent him to an insane hospital. Alexander I. transferred him to a general hospital. Later, Counsellor of State, Jelensky, converted by Sseliwanow,

37Psychology of Sex: Love and Pain.

38Psychology of Sex, Vol. 1.

39Psychopathia Sexualis.

40British Medical Journal, 1881.

41Medicine, 1901.

set the man free. Soon Skoptzies were all through Russia and even at the Court. The principal argument of these people is the nonconformity of orthodox believers, especially priests, to the doctrine they profess. They contrast the morals of these persons with the chaste lives, abstinence from liquor and continual fasts of the "White Doves." As Scriptural foundations of their rites and belief, are cited Matthew xix., 12: "And there be eunuchs which have made themselves for the kingdom of Heaven's sake," etc.; and Mark ix., 43-47: Luke xxiii., 29: "Blessed are the barren," etc., and others of like nature. Pain is represented as voluntary martyrdom, persecution is the struggle of the spirit of darkness with that of light. Persons join the order for its monetary advantage. They take into service young boys who soon become lost to society and lie with effrontery. They have secret methods of communicating with each other and exhibit a passion for riches. The most perfect are those "worthy of mounting the white horse," "the bearers of the Imperial seal," who are deprived of testicles, penis and scrotum. Castration among these people is performed at one stroke or at two different times. In the first case one cicatrix is left and in the latter two. The greater number—those who submit to the "first purification," conferring upon them the "lesser seal," lose testicles and scrotum. These people have lost the "keys of hell," but retain the "keys of the abyss," (female genitals). An instrument of excision, hot iron, glass, wire, sharpened bone and old razors are used. Only nine fatal cases resulting from these operations are reported. At St. Petersburg, a rich Skoptzy constantly kept girls—mostly Germans—for his gratification, after having entered into the "first purification." Few were able to remain with him over a year; they always returned home in impaired health. Women Skoptzies do not have their ovaries removed, but the external genitals are mutilated.

Ablation is first obtained by applying fire or caustics to the nipples; second, by amputation of the breasts, one or both; third, by diverse gashes, chiefly across the breast; and fourth, by resection of the nymphae or clitoris. The resultant cicatrizes deform the vulva.⁴²

⁴²Gould: Anomalies.

The greatest English-speaking sect with a similar creed not marked by mutilation, however, is the "Shakers,"⁴³ founded by "Mother Ann Lee." She was an illiterate, hysterio-epileptic hydrocephalic eighth child of a blacksmith. She was born in England in 1736. Her employment in a cotton factory from early girlhood, and later the exhausting cutting of fur for hatters prevented an education. As she never learned to read and write, there was probably present also that lower bourgeois contempt for letters as worldly, still evident in her followers. Her parents in 1758 joined a sect of quakers, called from their hysteric motor explosions, "Shaking Quakers." She herself had marked epileptiform attacks, attended by religious ecstasy and visions. During these, while in jail for hysterio-religious antics (which, however, did not go so far as the nude antics of the early disciples of Fox and Penn) she saw "Christ, who satisfied all her desires." She had a clear view of the mysteries of human iniquity, of the root and foundation of human depravity, of the "very act of transgression committed in the garden of Eden." Henceforth she bore "open testimony against lustful gratification of the flesh, and testified in open-pointed manner that the soul could not follow Christ in regeneration while living in the works of natural generation or any of the gratifications of lust."

Ann Lee from early childhood had shown repugnance to marriage, but was persuaded to marry a blacksmith by whom she had four decrepid children, who died in infancy. She then left her husband, but went to America with him later. Here she baffled his demands for coitus until he left her for a complacent companion. She had meanwhile become the leader of a sect which settled in Watervliet, New York. They were few in numbers until boomed by a hysterio-religious epidemic among the Baptists. At this time the usual hysteric miracles were performed by Mother Ann. She died at 49. She was a dwarfish, thick-set woman with short legs, long arms and a disproportionately large head. After the hysterio-religious epidemics of 1799-1801, the sect increased enormously in number, but ceased so to do after 1830. The sect holds

43Communitic Societies of the United States, Nordhoff.

that God is a dual (male and female) being. Distinction of sex is eternal. The angels are male and female. The Shakers, like the Eddyists, hold that disease is an offense to God and that it is the power of man to be healthful if he will. They believe, like the Rabbis, that Adam was originally a dual being. Lilith, according to the Talmud, was the female element of this hermaphrodite. United the two quarreled; separated, she became a thorn in Adam's flesh. By her Adam begot devils. In Shaker theology Eve is a devil begetter also. Lilith so threatened Eve's posterity that incantations were long used against her, which have sunk into cradlesongs or lullabies (*Lilith abi.*) Considering the ascetic celibate requirements and the enforcement of communal life and property, "Mother Ann Lee" had greater success than "Mother Eddy," a far greater worshiper of the almighty dollar. As her sexual trend was present before marriage, it was clearly not the result of the male sexual brutality which so often produces female distaste and hatred for coitus whereby the tenderest proof of human affection is converted into torture.

The satisfaction of all the desires of "Mother" Lee acted as an inhibition (through a quite frequent operation of a psychologic law) on future sexual relations, creating what was practically a sexual mental impotence, giving erethism the guise of asceticism. Pain of a purely mental type may become an algolagny through paraesthesia of jealousy, as Stefanowski⁴⁴ has shown.

Venereal excesses, remarks Moreau de Tours,⁴⁵ affect at the same time all the senses. This cerebral and sexual organ excitation kills the moral element of passion love properly so-called. Sexual insensibility may still preserve some energy; needs and appetites may still make it felt, but to satisfy it the excitants of former days no longer suffice. Morally and physically recourse must be had to extraordinary and impossible sensations such as formerly would not even be conceived. It is no longer the emotional element of love which is in play but the intelligence, which regretting the pleasures of which it

⁴⁴*Alienist and Neurologist*, 1893.

⁴⁵*La Psychologie Morbide*.

retains the remembrance, endeavors to recreate it under any form soever.

Unfaithfulness of a loved female often increases desire. The image of caresses lavished on a rival, Bourget remarks, reawakens, with extraordinary acuteness in a man, remembrances of caresses lavished on himself. By a singular detour this acts like a lascivious dream and jealousy leads to desire.

Paræsthesia of jealousy attains its height in passive algolagny where the passivist enjoys an atrocious pleasure in seeing his beloved enjoyed by another more favored than himself. Bourget thus alludes to this: To love with the heart is to find the supreme happiness in the absolute gift of one's self, in complete self-abdication and then the pain even that the loved object inflicts becomes a joy. To a lover who loves with all his heart, known unfaithfulness has this sweetness—it enables him to evince his love in pardon.

"Venus in Furs," depicts a young, elegant, spirited man, who voluntarily becomes the lackey of a cruel mistress. He receives kicks, lashes, poundings. He experiences a strange volupty at the sight of a rival who has obtained the favors of his adored. Far from being jealous, he continues to receive blows, kicks and lashes even from the hands of his favored rival and finds therein a strange mixture of pain and joy.

The influence of the etiologic moment on the sexual appetite is apparent in Rousseau and Sacher Masoch. Sexual erethism had appeared in Rousseau through the upset of the first period of stress. This erethism usually quiets down. Very frequently it does not enter consciousness as erethism. Rousseau was sent by his maternal uncle to a school kept by Minister Lambercier, where he learned "Latin and that poor rubbish which accompanies it as an education." Here originated at eight his passive algolagnic trend.

"Mademoiselle Lambercier showed toward me a mother's affection and also a mother's authority, which she sometimes carried so far as to inflict on us the usual punishment of children when we had deserved it. For a long time she was content with the threat, and that threat of chastisement which for me was quite new seemed very terrible; but after it had been executed I found the experience less terrible than the expecta-

tion had been; and, strangely enough, this punishment increased my affection for her who had inflicted it. It needed all my affection and all my natural gentleness to prevent me from seeking a renewal of the same treatment by deserving it, for I had found in the pain and even in the shame of it an element of sensuality which left more desire than fear of receiving the experience again from the same hand." It is true that, as in all this a precocious sexual element was doubtless mixed, "the same chastisement if inflicted by her brother would not have seemed so pleasant." The punishment was inflicted a second time, but that was the last, Mademoiselle Lambercier having apparently noted the effects it produced. Henceforth, instead of sleeping in her room and bed, he was placed in another room and treated as a big boy. "Who would have believed," "that this childish punishment, received at the age of eight from the hand of a woman of 30, would have determined my tastes, my desires, my passions for the rest of life." This trend drove him almost mad, but he maintains the purity of his morals, and that joys of love existed for him chiefly in imagination. Here Jean Jacques evinces the pruriently prudish mentality which combines intense sexual preoccupation with external frigidity. This incident "gave desire such an extraordinary turn that confined to the sensation just described" that he "sought no further and with blood seething with sensuality almost from birth," he "preserved purity beyond the time when coldest constitutions lose their insensibility. Long tormented, without knowing by what, every handsome woman was viewed with a delighted rumination over their physical charms which transformed them into so many M'lles Lamberciers." Here was evident that mixoscopic sense of normal coitus which appears such a virtue to hysterics, masturbatory neurasthenics, inverts, perverts and Narcissus-like auto-erotics. "To fall at the feet of an imperious mistress, to obey her mandates or implore her pardon" were for Jean Jacques, "the most exquisite enjoyment." The more the blood was inflamed by a lively imagination, the greater was the semblance of a whining lover. Havelock Ellis remarks that all the former conditions of fear, shame and precocious sexuality were here present in an

extremely sensitive child who was destined to become the greatest emotional force of his century, thus rendering him receptive to influences which would have had no permanent effect on any ordinary child. The first sexual feelings are sometimes experienced under the stimulation of whipping at the age of seven or eight; Moll mentions such cases, but no permanent perversion necessarily follows. On Rousseau's highly sensitive and receptive temperament it was a germ that fell and fructified.

Leopold Sacher de Masoch was born in 1836, of a mixture of Spanish-Shemitic (the Spanish ancestors intermarried with "new Christians;" a synonym for forcibly converted Jews. Masoch is Hebrew) German and Slavonic blood. His father (a police director) married a Little-Russian lady.⁴⁶

The novelist, the eldest child, was born after nine years of marriage. In infancy he was so delicate that he was not expected to survive.⁴⁷ He began to improve, however, when his mother gave him to be suckled to a robust Russian peasant woman, from whom, as he said later, he gained not only health, but his "soul." He learned all the strange melancholy legends of her people. A love of the Little-Russians which never left him. He was half a Russian by birth. He lived in a province in whose mingled races the East and the West meet. When still a child, Sacher-Masoch was in the midst of the bloody revolution which culminated in 1848. When 12 the family migrated to Prague. The boy, though precocious in his development, then first learned the German language, of which he attained such a mastery. Very early he had found the atmosphere and even some most characteristic elements and peculiar abnormal types which mark his work.

As a child, he was greatly attracted by representations of cruelty; he loved to gaze at pictures of executions, the legends of martyrs were his favorite reading. At the onset of puberty he regularly dreamed that he was fettered in the power of a cruel woman who tortured him. The women of Galicia either rule their husbands entirely and make them their slaves or themselves sink to be the wretchedest of slaves.

⁴⁶Havelock Ellis, *Psychology of Sex*, III.

⁴⁷Schlichtegroll *Sacher-Masoch und Masochismas*.

At 10 Leopold witnessed a scene in which a woman relative, on the paternal side, played the chief part. This scene probably left an undying impress on his imagination. She was a beautiful wanton creature. The child adored her, impressed by her beauty and costly furs. She accepted his devotions and little services. She would sometimes allow him to assist her in dressing. When once kneeling before her to put on her ermine slippers, he kissed her feet; she smiled and gave him a kick which filled him with pleasure. Not long afterward occurred the episode which so affected him. He was playing with his sisters at hide-and-seek and had carefully hidden himself behind the dresses on a clothes-rail in her bed-room. At this moment she suddenly entered the house and ascended the stairs, followed by a lover. The child, who dared not betray his presence, saw the countess sink on a sofa to caress her lover. But a few moments later the husband, accompanied by two friends, dashed into the room. Before, however, he could decide which of the lovers to turn against, his wife had risen and struck him so powerful a blow in the face with her fist that he fell back streaming with blood. She then seized a whip, drove all three men out of the room, and in the confusion the lover slipped away. At this moment the clothes-rail fell and the child, the involuntary witness of the scene, was revealed to her, who now fell on him in anger, threw him to the ground, pressed her knee on his shoulder and struck him unmercifully. The pain was great, yet he was conscious of a strange pleasure. While this castigation was proceeding the husband returned, no longer in a rage, but meek and humble as a slave, and kneeled down before her to beg forgiveness. As the boy escaped he saw her kick her husband. The child could not resist the temptation to return to the spot; the door was closed and he could see nothing, but he heard the sound of the whip and the groans of the husband beneath his wife's blows.

This scene, acting on a highly sensitive and somewhat peculiar child, is the key to the emotional attitude which so much affected Sacher-Masoch. Woman became to him during a considerable part of life, creature at once to be loved and hated, a being whose beauty and brutality enabled her to

set her foot at will on the necks of men. In the heroine of his first important novel, the *Emissary*, dealing with the Polish Revolution, he embodied the contradictory personality of his relative. Even the whip and fur garments, Sacher-Masoch's favorite emotional symbols, find their explanation in this early episode. He was accustomed to say of an attractive woman: "I should like to see her in furs," and, of an unattractive woman: "I could not imagine her in furs." His writing paper at one time was adorned with a woman in Russian Boyar costume, her cloak lined with ermine, and brandishing a scourge. On his walls he liked pictures of women in furs, of the kind of which there is so magnificent an example by Rubens at Munich. He would even keep a woman's fur cloak in his study and stroke it from time to time, finding that his brain thus received the same kind of stimulation.

At 13, in the revolution of 1848, young Sacher-Masoch received his baptism of fire; carried away in the popular movement, he helped to defend the barricades together with a young lady, a relative of his family, an amazon with a pistol in her girdle, such as later he loved to depict. This episode was, however, but a brief interruption of his education; he pursued his studies with brilliance. On the higher side his education was aided by his father's æsthetic tastes. Amateur theatricals were in special favor at his home. There the serious plays of Goethe and Gogol were also performed, thus helping to train and direct the boy's taste. A tragic event at 16, first brought to him full realization of life and consciousness of his power. This was the sudden death of his favorite sister. He became serious and quiet, he always regarded this as a turning-point in his life.

At the Universities of Prague and Graz when only 19 he took the doctor's degree in law. Shortly afterward he became *privatdocent* for German history at Graz. Gradually, however, the charms of literature asserted themselves definitely. He soon abandoned teaching. He took part, however, in the war of 1866 in Italy. At Solferino he was decorated on the field for bravery by the Austrian field-marshal. These incidents had little disturbing influence on Sacher-Masoch's

literary career. He was gradually acquiring European reputation by his stories.

A far more seriously disturbing influence had already begun in his life in love episodes. Some were of slight and ephemeral character; some a source of unalloyed happiness, all the more if there were an element of extravagance to appeal to his Quixotic nature. He spent some blissful days when he ran away to Florence with a Russian princess as her private secretary. More often they seem to have culminated in bitter deception and misery. After a relationship from which he could not free himself for four years he wrote *Die Gescheidene Frau, die Passionbeschichtelines Idealisten*, putting into it his own personal history. Eventually he became engaged to a sweet charming young girl. This evil genius now met him in a 27-year-old glove-maker. She made various attempts to attract men of superior position, but, although she had had one or two lovers, her success had been but moderate. She read the *Venus in Furs*, then lately published, and wrote to the author. Sacher-Masoch does not appear to have met any woman with whom he adopted unreservedly the position depicted in his books. He had conquered his inclinations, having found no woman in whose hands he would care to trust himself as a slave. The glove-maker judged that in approaching Sacher-Masoch it would be desirable to take the tone of the dominating woman he idolized. She adopted the name of his heroine, Wanda. She had much skill in intrigue. Sacher-Masoch's love of adventure and extravagance rendered her task easy. After weaving around him a complicated web of mystification—she would not allow him to see her for a long time, at first insisted on wearing a mask, and forbid him to touch her—this ignorant, uneducated, unscrupulous woman had the sensitive, high-minded, but rather weak novelist entirely in her power. He broke off his engagement and after the birth of a child, in 1873, he married her. For many years after this there was little but wretchedness in his life. Two children were born. The wife agreed to take into the house a daughter her husband had had at an earlier period by an actress. Any love she may have felt for him soon disappeared. She subjected him to every humiliation. She sepa-

rated him from his friends and compelled him to prostitute his powers to obtain money. She lived openly with her lover, an utterly unscrupulous man, but clever journalist.

She insisted on coming to nurse the father's favorite child, but left him to die alone on a message from her lover. At last Sacher-Masoch definitely separated from her. He had become attached to a gentle, highly accomplished normal woman who cared for him with almost maternal devotion and bravely resolved to share her life with him. In 1833 they settled in Lindheim, a village in Germany near the Tounus, a spot to which he seems to have been attached because in the grounds of his estate was a haunted ruined tower associated with a tragic mediæval episode. Here, after many legal delays, Sacher-Masoch was able to render his union legitimate. Here two children were in due course born. Here the novelist spent the remaining years of his life in comparative peace, though to the last threatening abusive letters were sent by the divorced wife. At first, treated with suspicion by the peasants, Sacher-Masoch gradually acquired great influence over them. He became a kind of Tolstoy, the friend and confidant of all the villagers (something of Tolstoy's communism is to be seen in books like "*The New Job*," which he wrote at this time.) The theatrical performances which he inaugurated, and in which his wife took an active part, spread the fame of the household in many neighboring villages. Meanwhile his health began to break up. Nauheim in 1894 was of no benefit. He died March 9, 1895.

While the sexual effects of flagellation are largely psychic in origin still there is a physical influence. Among, remarks Milligen,⁴⁸ the varied moral and physical remedies introduced by the priesthood and physicians for the benefit of society, flagellation once held a most distinguished rank. It was supposed to reanimate the torpid circulation of the capillary or cutaneous vessels to increase muscular energy, promote absorption and form the necessary secretions. Almost no limit can be placed in many cases on its action; as a revulsive it may be peculiarly beneficial. Urtication, or stinging with nettles, has been prescribed

48Curiosities of Medical Experience.

with advantage. As a religious discipline, for such has this system of mortification been termed, it has been considered as most acceptable to heaven; so much so that the fustigation was commensurate with the sinner's offense. The moral influence of flagellation in the treatment of disease was appreciated by the ancients. It was strongly recommended by the disciples of Aesclepiades, by Coelius Aurelianus, by Rhases and Velascus. *Libido sexualis*, remarks Krafft-Ebbing⁴⁹ may be induced by stimulation of the gluteal region by castigation. That Ellis's position is too strongly put seems clear. Not only does physiology and religiosity render the position of Havelock Ellis, as to religious flagellation, doubtful but church history destroys its tenability. Most of the monastic orders, remarks Cooper,⁵⁰ forbade religious persons to inspect any part of their naked body, lest such indulgence should give rise to wicked thoughts. If, remarks Tertullian, such discipline cannot be performed in secret without danger, is it prudent to execute it in presence of witnesses? Nature has made either fear or shame the attendant on every evil. In, remarks Milligen,⁵¹ monastic orders of both sexes flagellation became a refined art. Flagellation was of two species: the upper and the lower; the upper inflicted upon the shoulders; the lower chiefly resorted to when females were to be fustigated. This mode was adopted, according to their assertions, from the accidents that might have happened in the upper flagellation where the twisting lash might have injured the sensitive bosom. In addition to this device nudity was also insisted on.

The power of confessors, remarks DeLolme (Abbe Boileau)⁵² in disciplining their penitents became so generally recognized that it obtained even with ecclesiastics. Before the close of the first Christian millenium sexual abuses from discipline were so obvious, that Pope Adrian IV. (A. D. 772), forbade priests to beat their penitents. Despite this prohibition priests and church dignitaries continued to eulogize flagellation. In 1210 A. D. an epidemic of flagellation occurred

49*Psychopathia Sexualis*.

50*History of the Rod*.

51*Curiosities of Medical Experience*, London, 1839.

52*Histoire des Flagellans* (Granet's French translation from Boileau's Latin), Amsterdam, 1722.

which was glowingly eulogized by St. Justin of Padua. In 1260 A. D. Rainier founded the beating frairs, which spread to England, France, Germany, Bohemia and Poland. These Conan Doyle vividly pictures in the "White Company." The sexual abuses therefrom were soon so evident that Pope Clement VI, (A. D. 1332) issued a bull against them. The German bishops forbade them in their sees. Despite Henry III. and Catherine de Medici, who encouraged them in the 16th century, Gerson, chancellor in the university of Paris, denounced the practice as contrary to the gospel and offensive to decency and morality. Magdalen of Pazzi, a Florentine Carmelite nun, in the sixteenth century obtained by her flagellations and their results a large following. It was her greatest joy when the prioress had her hands tied behind her back and had her whipped on her bare loins in presence of all the Sisters, when she would, in a wild erethism, cry:

"It is enough! Inflamm not more strongly this flame which devours.

Not this manner of death is it that I desire. It is associated with too many delights and blessings."

But the spirit of impurity wove the most lascivious fancies and she was several times near losing her chastity. Elizabeth of Gentin actually passed into a state of bacchanalian furor. As a rule when excited by flagellation she believed herself united with her "ideal." This condition was so exquisitely pleasant that she would frequently cry out, "Oh, love, Oh eternal love. Oh, you creatures cry out with me love, love." Flagellation effects, according to Milligen, sometimes bore an analogy to those of the Saturnalia and Luperculia. The discipline of the flagellants was not always dissimilar to the Luperci. The sect of the Foreinists, which arose in the 18th century, had performances with all these features which were revealed by investigation of the Archbishop of Trevaux. The cases of Fathers Adriaensen, Girard and Achazius during the reign of Napoleon I (who suppressed the legal proceedings before the Court of Liege) further illustrate the erethismic element. The sect of the penitents of California continues (albeit disavowed by the church) these practices adding to them crucifixion of a member. The United States and state

authorities have vainly endeavored to put them down. That the erotic element was quite apparent in the public practices at times is evident from the description of the Spanish processions of 1710 by Colmenar who says:⁵³ At this procession are seen all the penitents and disciplinists of Madrid. They wear a sugar loaf cap three feet high with a lined strip falling over the face. Some practice the discipline from piety, but more to please their mistresses. These wear gloves and white shoes with sleeves adorned with ribbons. Tied to the cap or the scourge is the color the mistress favors. That there is often a sadism mixed with the passive algolagnia is clearly evident and this has been behind the seeming brutality with which religionists have forced the asceticisms they practice on others. The suffering resultant on the topsy turvy altruism which seeks to make people happy in the way deemed happiest by the egotist is pictured by De Mille in a very vivid romance.⁵⁴

The brutalities there depicted are hardly greater than these "ascetics" have been guilty of in the much misused name of Christianity.

⁵⁴Strange Manuscript found in a Copper Cylinder.

⁵³*Annales d'Espagne et du Portugal.*

IS GENIUS A SPORT, A NEUROSIS OR A CHILD POTENTIALITY DEVELOPED?*

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A SINGULAR contrast between two similar constitutions due to effects of differing environments appears in Walter Scott of Waverly fame and John Ruskin. Both were of that Celto-Teutonic race admixture which dominates the English-speaking nations. Both were brought under a faith which was not that of the majority of Scotch. The Evangelical Anglican, however, was more akin to the dour uncultured heresy hunter than to the Scottish Episcopalian dissenter. He had lost all individuality in narrow ecclesiasticism. Whether "muckle-mouth Meg's" facial peculiarities were stigmata of degeneration or simply, as Browning hints, a slight exaggeration of race peculiarities, Scott's ancestor who married her under penalty of the gibbet gained an apt loving helpmate. It seems probable that the "bad pipes used for tubing", of which Roberts Bartholow speaks, were products of the Rutherford side. Such vessel-states, together with suboxidation tendencies with which they so often form a vicious circle,

*Continued from *The Alienist and Neurologist*, February, 1910.

appear in that family. The paternal grandfather was an extremely active, quick, keen, hot-tempered man. He married a woman whose brother was an imbecile. Scott's father died at the age of 70 in a state of post-paralytic dementia. He was, however, a well balanced man of the narrow type which Scott has depicted in Mr. Fairford of "The Red Gauntlet." Scott's mother was the daughter of an eminent physician. She also died during an attack of aphasic hemiplegia at an advanced age. Her brother died during a gouty attack with symptoms of aphasia. Her sister died suddenly from an unknown cause. Scott's father and mother had twelve children of whom six died in infancy. Of the remaining six, four, fifty years after Scott's birth, had left no descendants. Scott's eldest brother was an irritable, tyrannical boy, who, in bad humor, kicked everybody without mercy. He composed verses which met with applause among his fellow officers. Scott's sister was a neuropathic hysteric and died young. Of the other two brothers, one emigrated to Canada and displayed no striking characteristics. The other, Daniel, was a ne'er-do-well who was dissipated, indolent and what Scott could hardly bear, a coward. Scott at first regarded this cowardice as a moral defect, rather than a physical deficiency. This view he later abandoned and attempted to do his brother justice under the character of Conachar in "The Fair Maid of Perth." Here a being with considerable moral courage is rendered useless for the command of a Celtic clan because of cowardice arising from physical conditions.

Carlyle considered the poetaster brother as of much greater intellect than Sir Walter, which like most of Carlyle's ex cathedra judgments, is anything but a compliment to the brother. The fecundity and infant mortality stigmata seem very evident in this family, yet show more of the arterial degeneracy tendency than the purely neuropathic. Scott had an early tendency to hydrocephalus which undoubtedly, like Cuvier's, prevented, except in one instance, undue tendency to premature suture closing, thus giving an unusual play to potentiality of cerebral advance. Had ependyma formation in lieu of cerebral tissue taken the place of hydrocephaly, a kephalonic (macrocephalic) imbecility would have resulted.

Munger¹, with charlatanish materialistic occultism, made the following plea for craniectomy on the basis of possible results in Scott's case. "Owing to imperfect bone-making, premature union of the two parietal bones along the sagittal suture occurred, thus causing the brain to push the vault of the skull up and back, giving it the peculiar oblong shape so often noted. Had the defect in bone-making extended to the other sutures, Scott inevitably would have been a microcephalous idiot. If the brain had not been forced to overcome this bone defect, it would have been larger and its convolutions would have been more numerous. Scott would have been another Shakespeare in fact, had there been room in his cranium to allow an active brain to functionate properly." No craniectomy could, however, ever have given dramatic expression to Scott. This was all he lacked.

At the age of eighteen months the eruption of the primary teeth was attended by considerable constitutional disturbances including a high fever and paretic phenomena resulting in exhaustion and lameness. In consequence of this lameness Scott was sent to the country and placed in charge of his grandfather, the shepherd of whom laid him beside the sheep. The habit of lying on the turf there among the sheep and the lambs gave his mind a peculiar tenderness for these animals which it had ever after. Being forgotten one day upon the knolls when a thunder storm came on, his aunt ran to bring him in, and found him shouting, "Bonny, Bonny," at every flash of lightning.

Scott, never reticent about his lameness, gave in an interesting autobiographic fragment the clinical history of his ailment: "I showed every sign of health and strength until I was about eighteen months old. In the morning I was discovered to be affected with the fever that often accompanies the cutting of teeth. It held me three days. On the fourth, when they went to bathe me, as usual, they discovered that I had lost the power of my right leg. There appeared to be no discoloration or sprain. Blisters and other topical remedies were applied in vain. When the efforts of regular physi-

¹Munger, "*Century*," April, 1894.

cians had been exhausted without the slightest success, my anxious parents during the course of many years eagerly grasped at every prospect of cure which was held out by empirics, or ancient ladies or gentlemen who conceived themselves entitled to recommending various remedies, many of which were sufficiently singular." When he was four years old he was sent to Bath, where for a year he "went through all the usual discipline of the pump room and baths, but he believed without the least advantage to his lameness." He was treated by the celebrated 18th century electrical quack, Graham, who made a great parade of electrical appliances. Scott was not benefited in the least by the magnetic touch of the quack or by the electric current.

Scott's maternal grandfather, Dr. Rutherford, professor of medicine in the University of Edinburgh, sent him into the country to rough it,² and made efforts to call into action the affected muscles by the will. This method consisted in placing bright objects or things that the boy especially desired in such a position that he could get them only by the most powerful efforts, in which the affected member participated. By persistent use of this plan of "natural exertion" great gain resulted in will power over the muscles. They increased in size and range of actions. The limb ultimately became quite useful, although always lame. This method of dominating the paralyzed and wasted muscles by the forcible action of the will is possible only in cases in which voluntary control is still preserved. Some response to the will may be present when the faradic or interrupted galvanic currents have no longer any power to excite muscular contraction. That this was the case with Scott is shown by the results of the method of "natural exertion." As he writes in his autobiography: "My frame gradually became hardened with my constitution, and being both tall and muscular, I was rather disfigured than disabled by my lameness. The personal advantage did not prevent me from taking much exercise on horseback and taking long journeys on foot, in the course of which I often walked from twenty to thirty miles a day."

²Bartholow, *New York Medical Journal*, November 4, 1899.

Scott became very early a declaimer.³ At six years old he is described as having an astonishing appreciation of poetry. "He was reading," remarks Mrs. Cockburn, "a poem to his mother when I went in. I made him read on; it was the description of a shipwreck. His passion rose with the storm. 'There is the mast gone,' says he; 'crash it goes,' 'they will all perish.' After his agitation he turns to me. 'This is too melancholy,' says he, 'I had better read something more amusing.' And after the call he told his aunt he liked Mrs. Cockburn, for she was a virtuoso like himself. 'Dear Walter,' says Aunt Jenny, 'what is a virtuoso?' Don't you know? Why it is one who wishes and will know everything.' "

Scott's surroundings tended to create a healthy mental atmosphere in him. He had in every sense of the word several wholesome refuges. The picture he draws in "*Marmion*" fully illustrates this:

"For I was wayward, bold and wild,
A self-will'd imp, a grandame's child:
But half a plague and half a jest
Was still endured, beloved, caress'd."

In many respects Scott's training had a decided tendency to counteract any moral effects which might have been produced of the lameness.⁴ As Scott grew up, entered college and began his legal studies, first as apprentice to his father and then in the law classes of the University, he became noticeable for his gigantic memory, the rich stores of romantic material with which it was loaded, his giant feats of industry for any cherished purpose, his delight in adventure and in all athletic enterprises, his great enjoyment of youthful "rows" so long as they did not divide the knot of friends to which he belonged and his skill in peacemaking amongst his own set. During his apprenticeship his only means of increasing his slender allowance with funds which he could devote to his favorite studies, was to earn money by copying. He once wrote 120 folio pages with no "interval either for food or rest," fourteen or fifteen hours very hard work at the very least, expressly for this purpose.

³Lockhart's *Life of Scott*.

⁴English Men of Letters, Scott: Hutton.

In the second year of Scott's apprenticeship, at about the age of sixteen, he had an attack of hæmorrhage, no recurrence of which took place for forty years. During his illness silence was absolutely imposed upon him, two old ladies putting their fingers on their lips whenever he offered to speak. It was at this time that the lad began his study of the scenic side of history, and especially of campaigns which he illustrated for himself by the arrangement of shells, seeds and pebbles, so as to represent encountering armies in the manner referred to in the introduction to the third canto of *Marmion*. He also managed so to arrange the looking glasses in his room as to see the troops march out to exercise in the meadows as he lay in bed. His reading was almost all in the direction of military exploit, or romance and mediæval legend and the *Ariosto*. Later he learned Spanish and devoured Cervantes whose 'novelas,' he said, "first inspired" him with the ambition to excell in fiction and all that he read and admired, he remembered. Scott used to illustrate the capricious affinity of his own memory for what suited it, and its complete rejection of what did not by old Baillie of Meikledale's answer to a Scottish divine who complimented him on the strength of his memory. "No, sir," said the old Borderer, "I have no command of my memory. It only retains what hits my fancy, and probably, sir, were you to preach to me for two hours, I would not be able when you finished to remember a word you had been saying." This type of memory, however, is the highest.

His training was healthful on both sides. The precision of his father formed an apt foil to his grandfather's hot temper and the influence of the grandmother and mother who were more inclined to take the romantic side of things. The Scots were emphatically borderers who had the very similar traits of the Norwegian viking, and the Celtic cattle-lifting ancestors. There is much in Scott's career as a literary man that recalls at once the caution and dash of these two types. Scott's mother, who belonged to the cultured class of Scottish women, had an equable, sweet disposition. His grandmother was a somewhat capricious, humorous, albeit affectionate body, well acquainted with the history of her own and her husband's

family, which meant the history of the Scotto-English borderland.

Scott profited by his lameness. As Yonge remarks, not only was Scott thus led from his earliest years to cultivate a literary taste, but even, while still a child, he earned what, in some degree, may be termed a literary reputation. At nine years he was sent to the High School of his native city, where, as he had not been very well prepared beforehand, he was found to be a backward scholar in Greek and Latin. His mother, "a woman of good natural taste and feeling," had inspired him with a fondness for poetry, accustoming him to read Pope's Homer to her. To this his own inclination and probably his granddame's influence had combined old ballads of border warfare, and legends of striking events in Scottish annals. Many such tales he got by heart, "almost without intending it." Often on a winter's evening he would retail them to his schoolfellows, enlivening his narrative with the fertile touch of a precociously ready imagination. Like the "noble youths who forsook the hunting of the deer" to listen to the strains of the "Last Minstrel" on the banks of Yarrow, his schoolfellows would sit around their dame's fire-side drinking in his stories with rapt attention. "Looking up," as Yonge remarks⁵ "with as fond and proud admiration as if he had been the cock of the school at golf or football."

Scott had little of the egotism which separates man from his fellows. He made many friends and from his earliest age displayed marked bonhomie.

Scott came directly under the influence of ballad poetry. Its effects on him abundantly appear in his poems which ring like the trumpet with the Border spirit. At twelve years Scott was transferred to College. There he extended his unacademical knowledge by learning Italian. He became so enamoured of that language as to maintain in an essay, to the indignation of the Greek professor, the superiority of Ariosto to Homer. He supported his heresy, to quote his own words, "by a profusion of bad reading and flimsy argument." The legal studies (for which the university afforded

⁵Life of Sir Walter Scott—Great Writer Series.

facilities) were those to which his father attached greatest importance. Scott's father destined him for his own profession. With this view he placed Scott in his own office to acquire the technical knowledge which would be indispensable to him, were he to become a writer⁶ and very useful if he should prefer the more dignified position of a barrister. Although Scott disliked legal drudgery, his affection for his father prevented him from crossing his soul like the clerk described by Pope who "penned a stanza while he should engross." He contrived to mingle with his porings over Erskine's "Institutes" the perusal of more attractive volumes of a most miscellaneous kind. These he read "in beginning, at the middle, or end of a volume." He skimmed them with what one of his brother clerks called "a hop-step-and-a-jump perusal," knew as much about them, however, as the other acquired by the more methodical plan of beginning with the preface and plodding on to the "finis." This desultory mode of reading (which has great attractions for many and as Yonge remarks, is not without very considerable advantages of its own), was his habit through life. Extracts from his note-book of 1792 when he had just been called to the Bar present an amusing idea of the variety of his studies and of the objects which attracted his curiosity and interest. One day he is delighted by the present of an old border war horn from a friend whose gardener had been profanely degrading it into a grease-horn for his scythe. A page is occupied with the Norse original of "Vegtam's Kvitha, or the Descent of Odin and the English poetical version of Mr. Gray." Next comes a page headed "pecuniary distress of Charles I.," with the transcript of a receipt for some plate lent to the king in 1643. The verses of Canute on passing Ely. Then a translation by a Devonshire gentleman of the death song of Regner Lodbrog. After this appear an Italian canzonet in praise of blue eyes (which were much in favor with him at this time) and extracts from an old journal about Dame Janet Beaton, the Lady of Branksome of the "Lay of the Last Minstrel," and her husband Sir Walter Scott of Buccleuch, called Wicked Wat; extracts about

⁶Writer to the Signet: Scotch solicitor's title.

witches and fairies; notes on the second sight with extracts from Aubrey and Glanville and a list of ballads to be discovered or recovered also appear. The whole completing as strange a medley as ever formed a relaxation from close studies. The last of these memoranda was undoubtedly that in which he took the keenest interest. Few young lawyers have much practice to occupy them. Scott's business was not too great to hinder him from making frequent hunts after relics of the olden times, among which ballads held a principal place. "The acquisition was the harder since in many cases no copies of them existed either in print or manuscript but they were preserved only in the tenacious memory of old peasants, male and, still oftener, female." Many passages in the novels are scraps of autobiography. The experiences and labors of which Mr. Oldbuck boasts to Lovel were no doubt records of the author's successes and of the means by which successes were gained. He would not have grudged "tobacco snuff and the complete Syren in the purchase of a bundle of ballads two hundred years old," nor less in harmony with his jovial temper, was the drinking of two dozen of strong ale, could such a comotation have coaxed the proprietor of a similar treasure to bequeath it to him in his will.

A much more emphatic sketch of Scott's career at this period is to be found in *Red Gauntlet*. The two friends are admitted by Scott himself to be intermixed sketches of himself and a friend. The Mr. Fairford of the story is Scott's father rendered more narrow than the original. The paranoiac litigant, Peter Peebles, was at one time a client of Scott. The story all through shows that Scott studied law more from both its broader constitutional side and from its humorous aspects than from the ordinary standpoints. More than once he elsewhere sketches himself in respect to this tendency to desultory reading. In "*Rob Roy*" it appears where Osbaldistone discovers his son's diary which seems to have been as heterogeneous a collection as Scott's note-book just cited. Scott's great ambition was to found a branch of the Scotts whose social status should be as high as that of the Dukes of Buccleuch, the head of the Scott family. This ambition was defeated, not by Scott's genius, but by his marriage. Scott,

like Byron, married a neurotic woman of the amiable, loving type which is so fascinating. She had a thoroughly kindly nature, loved Scott, sunned herself in his prosperity and tried to bear his adversity cheerfully. The marriage was a romantic one. Lord Downshire, introduced to her father by Dean Burd, fell in love with her mother and eloped. Her father dispatched Mrs. Scott and her brother to the mother, never noticing any of the three thereafter. On the death of the mother Mrs. Scott was sent to a convent school. When her education was finished she was placed under a duenna which did not prevent her from falling in love with what in Devonshire's opinion was a "detrimental." He asked Dean Burd to find some place where this troublesome charge could be placed. Ere the Dean had replied and just ere his wife and he had set off to a spa for the wife's health, the young ladies arrived. While on their way to the spa a young Scotch lawyer traveling on horseback happening to sit next to the Dean's party at dinner fell deeply in love with Miss Carpenter. He so conciliated the Burds that they invited him to their country home. Matters soon reached a point where Lord Downshire had to be told. Inquiries proved satisfactory. Downshire was thankful to be so respectably rid of his troublesome charge who thus found the kindest of husbands in Walter Scott. Mrs. Scott was not devoid of spirit and self-control. When Mr. Jeffrey (having reviewed *Marmion* in the *Edinburgh Review* in the depreciating omniscient tone then considered an evidence of critical acumen) dined with Scott on the day on which the *Review* appeared, Mrs. Scott behaved through the whole evening with the greatest politeness but fired a parting shot in her broken English as he took leave, "Well, good night Mr. Jeffrey, dey tell me, you have abused Scott in de *Review*, and I hope Mr. Constable has paid you very well for writing it." In her last illness she reproached her husband and children for their melancholy faces even when that melancholy was, as well she knew, due to the approaching shadow of her own death. The feeble frame of Lady Scott shattered Scott's ambition to found a family. He had two sons and two daughters. The former died as young men, childless. The older daughter Anne, laboring for years under a "miserably shattered

constitution, looking and speaking like one taking the measure of an unmade grave," finally succumbed to brain fever. Sophia, the younger, who became Mrs. Lockhart, died like her sister in what ought to have been her prime after a long illness which she bore with fortitude. Mrs. Lockhart left two children, Walter and Charlotte. The former died young without issue; Charlotte, who became Mrs. Hope, succeeded to Sir Walter's estate at Abbotsford. Of her three children only a daughter survived the period of childhood.

The marriage of Scott explains why genius so seldom leaves posterity. While Scott and Shakespeare were alike in literary business capacity, Scott, tainted by the speculative tendencies of the early nineteenth century, attempted to enlarge his already large income by becoming a publisher. He showed striking lack of executive ability in his choice of subordinates for important positions. His dictatorial tendencies overcame his foresight and he placed incapable submissive sycophants in executive positions. Byron, like Shakespeare, exhibited a greater sense of his business limitations in confining himself to literature. Had Scott done the same, the world might have been saved the pathos of his breakdown and his family might have survived under a less trying environment. Shakespeare, profiting by his father's bankruptcy, avoided errors which led to it.

The father and mother of John Ruskin, who was a Londoner by birth, were grandchildren of John Ruskin of Edinburgh. Both parents and their son John spent much of their early life in Scotland. The parental grandmother was a member of the Adair family, a Celto-Scandinavian family of South Galloway, mixed with the Agnews, a Norman stock of North Galloway. John Adair married Mary Agnew, a near Kinswoman of the hero of Dettingen, Sir Andrew Adair, who was hereditary sheriff of Galloway. Their son Thomas married Jean Ross, great 'aunt of Sir John Ross, the explorer. Catherine Ross (born of this last marriage) married James Tweddale, a holder of the original Covenant. John Ruskin, the grandfather of the critic, in 1781 ran away with Catherine Tweddale, then 16. They settled in Edinburgh Old Town where they entertained people of culture and position John

James Ruskin, their son, father of the critic, received a thorough classical education at Edinburgh. His father was in the wine trade, ruined himself by profuse hospitality and in 1812 died, deeply in debt. John James went to London and became a clerk in the then famous wine firm of Sir W. Gordon, Murphy & Co. His fellow clerk, W. Donecy, owns valuable vineyards in the Spanish sherry district. A firm of Ruskin, Telford & Donecy, resulted in 1809 which had a decided success. John James worked indefatigably, paid off his father's debts and in nine years saved sufficient to marry Margaret Cox, to whom he had been engaged for some years. She was the niece of John James' father, a daughter of John Ruskin's sister by a Capt. Cox of the herring trade, whose widow had maintained herself by inn-keeping. Catherine had a lay school education and Anglican Evangelical training. She was four years older than John James and at 20 had gone to Scotland to keep house for John Ruskin's widow.⁷ John James and she were married February, 1818, he being 33 and she 37. John Ruskin was born in Brunswick Square, London, February 8, 1819.

⁷Harrison's English Men of Letters: Ruskin.

(TO BE CONTINUED.)

DUTY OF THE LAWYER.

BY WOODROW WILSON.

(Incidentally of the Doctor Also.)

With Editorial Comment.

An address of admonition on lines of moral duty and integrity.

GOVERNOR WILSON, of New Jersey, Ex-President of Princeton, who, or some one like him, combining integrity, culture and appreciation of the popular needs in the present crisis of trial now on our beloved country, will be the next president, has recently given the Bar Association of Kentucky an old-time address such as might have fallen from the lips of the earlier judges of the highest courts of the land or from the "Father of his country." It reminds of Washington's farewell. Its principles are alike applicable to the medical profession and its practices and precepts and to the people. And as the saving of the popular integrity of mind and incidentally the perpetuation of a government of good and right-minded people is an essential aim of this magazine we give this masterly production full space in our pages.

It will be read by some lawyers, perhaps, who may need its admonitions, for many attorneys and jurists read *The Alienist and Neurologist*. All physicians, philosophers, psychologists and savants may profit by its exalted precepts and even some of the clergy. President Wilson speaks with "mouth of wisest censure," as though law was and is, or ought to be, as that great expounder, Blackstone, said of Divine origin, "though devils not infrequently endeavor to apply it." Editor.

"The lawyer is, by very definition, an expert in the law; and society lives by law. Without it its life is vague, inchoate, disordered, vexed with a hopeless instability. At every turn of its experience society tries to express its life, therefore, in

law; to make the rules of its action universal and imperative. This is the whole process of politics. Politics is the struggle for law—for an institutional expression of the changing life of society.

"The lawyer has always been indispensable, whether he merely guided the leaders or was himself the leader, and nowhere has the lawyer played a more prominent part in politics than in England and America, where the rules of law have always been the chief instruments of contest and regulation, of liberty and efficient organization, and the chief means of lifting society from one stage to the next of its slow development.

THE LAWYER'S IDEAL PART.

"The lawyer's ideal part in this unending struggle is easy to conceive. He, above all other men, should have a quick perception of what is feasible, of the new things that will fit into the old, of the experiences which should be heeded, the wrongs that should be remedied, and the rights that should be more completely realized.

"He can play this ideal part, however, only if he has the right insight and sympathy. If he regards his practice as a mere means of livelihood, if he is satisfied to put his expert advice at the service of any interest or enterprise, if he does not regard himself as an officer of the state, but only as an agent of private interest; if, above all, he does not really see the wrongs that are accumulating, the mischief that is being wrought, the hearts that are being broken and the lives that are being wrecked, the hopes that are being snuffed out and the energies that are being sapped, he can not play the part of guide or moderator or adviser in the large sense that will make him a statesman and a benefactor.

TEMPTATIONS OF MODERN LAWYERS.

"The truth is that the technical training of the modern American lawyer, his professional prepossessions and his business involvements, impose limitations upon him and subject him to temptations which seriously stand in the way of his rendering the ideal service to society which is demanded by

the true standards and canons of his profession. Modern business, in particular, with its huge and complicated processes, has tended to subordinate him, to make of him a servant, an instrument instead of a free adviser and master of justice.

"Moreover, the prepossessions of the modern lawyer are all in favor of his close identification with his clients. The lawyer deems himself in conscience bound to be contentious, to maneuver for every advantage, to contribute to his client's benefit, his skill in a difficult and hazardous game. He seldom thinks of himself as the advocate of society. He moves in the atmosphere of private rather than public service. His business becomes more and more complicated and specialized. His studies and his services are apt to become more and more confined to some special field of law. He becomes more and more a mere expert in the legal side of a certain class of great industrial or financial undertakings.

BENCH NEEDS UNSPOILED LAWYERS.

"It is evident what must happen in such circumstances. The bench must be filled from the bar, and it is growing increasingly difficult to supply the bench with disinterested, unspoiled lawyers, capable of being the free instruments of society, the friends and guides of statesmen, the interpreters of the common life of the people, the mediators of the great process by which justice is led from one enlightenment and liberalization to another.

"For the notable, I had almost said fundamental, circumstances of our political life is that our courts are, under our constitutional system, the means of our political development. Every change in our law, every modification of political practice, must sooner or later pass under their scrutiny. Our politics are bound up in the mental character and attitude and in the intellectual vigor and vision of our lawyers. They are the ultimate instruments of our life.

TWO TESTS FOR THE PROFESSION.

"There are two present and immediate tests of the service and ability of the legal profession to the nation, which, I think, will at once be recognized as tests which it is fair to apply. In the first place, there is the critical matter of the reform of

legal procedure. America lags far behind other countries in the essential matter of putting the whole emphasis in our courts upon the substance of right and justice. The actual miscarriages of justice, because of nothing more than a mere slip in a phrase or a mere error in an immaterial form, are nothing less than shocking. Their number is incalculable, but much more incalculable than their number is the damage they do to the reputation of the profession and to the majesty and integrity of the law.

"The second and more fundamental immediate test of the profession is its attitude toward the regulation of modern business, particularly of the powers and actions of modern corporations. The lawyer, not the layman, has the best access to the means by which the reforms of our economic life can be best and most fairly accomplished.

"It is in this matter more than in any other that our profession may now be said to be on trial. It will gain or lose the confidence of the country as it proves equal to the test or unequal."

The sentiments and principles of this address of Dr. Wilson are as good as the oath of Hippocrates imposed upon the early devotees of healing or the later code of ethics of American physicians.

They embody the precepts of Confucius and of our Christ and constitute the rule of moral action of all who are or would be men in any profession or calling, seeking the support and confidence of mankind and needing it for the common weal. Like the righteousness that exalteth a nation, this address rightly regarded, should uplift whoever reads and adopts its ennobling precepts.

The obsubilation of the moral sense, the obscuration of the conscientiousness, should never be severed from business, certainly not from law, medicine or theology and pure integrity in all of the professions is as essential as the enforcement of the pure food law in trade.

THE PSYCHOLOGIST IN THE SERVICE OF THE COMMUNITY.*

BY P. F. LANGE,

Director of Research, Iowa Institution for Feeble-Minded
Children,

GLENWOOD, IOWA.

VERY fortunate indeed must I count myself to have the opportunity of reading to this conference a paper about the services a psychologist hopes his work in time will be able to render the community.

Among the members of this Conference are representatives of most all the different kinds of state institutions in which the work of a psychologist would be of value. We have with us representatives of hospitals for the insane, institutions caring for the epileptics, the institution for feeble-minded, the industrial schools and reformatories and the orphans' home, and I feel sure that every one present is familiar with the juvenile courts and the public schools, the only work I shall mention outside of institutions proper.

I shall try to call your attention in the same degree to what I think is possible for the psychologist to accomplish, as to what I do not think he has any possibility of doing.

Encouraged by certain psychologists, and more especially through the absurdity of calling a department for child-study a "Psychological Clinic," as it is done in certain places, newspapers and popular magazines have brought to the public ideas about the practical value and use of psychology of which the largest part are entirely wrong, and the rest very much exaggerated.

*Read March 22, 1911, before the quarterly conference of chief executive officers of state institutions, Des Moines, Iowa.

There is, however, nothing more dangerous for a new movement than in the start to convey to the public exaggerated notions about what can be accomplished. This will invariably lead to one of two things,—it will either take the impatient public too long to see realized the wonderful things they expected, and then the public will lose all interest and not care for the smaller things really accomplished, or there will be given out, in order to keep up the expectation, or as a means of self-advertisement, “results” with no real scientific foundation.

Now let us consider the different kinds of institutions, one after another and try to find out of what value, if any, the work of a psychologist would be, on the one side for science, on the other side for the practical work of the institution. In both cases everything gained would be, in the first place more indirectly, in the second place more directly, of value for the community.

First, let us mention

The Psychologist in the Hospitals for the Insane.

What can psychology gain from the study of mental abnormalities? One familiar with the history of modern psychology knows that it was by clinical observations, by autopsies and by experiments on animals, that Gall (c. 1806), Flourens (c. 1820) and Foville (c. 1840) proved that the psychological processes are correlated to physiological processes in the cortex of the brain. He knows that it was in the same way that among others Bouillaud (c. 1850), Broca (c. 1860), Fritsch and Hitzig (c. 1870) proved that the whole cortex is not of the same significance, but that certain psychological processes are attached only to physiological processes in certain parts of the cortex. It was through his observation of two now famous cases that Broca, 1861, discovered that the function of speech is centered in a part of the brain less than two centimeters in diameter in the left third frontal convolution. It was through their observations of still more cases that Wernicke, Lichtheim, Kussmaul, and others gave us that understanding of the processes involved in voluntary speech that we have now, and, in

just the same way, Wernicke, Charcot, Störring and others gave us what little knowledge we have of the processes involved in reading and writing. Through clinical observations it was that Carl Lange was led to the investigations that resulted in his theory about the nature of emotions, well nigh the most important psychological discovery in the last fifty years. (That this theory now is a part of common knowledge is due much more to that American physician, the genius among American psychologists, William James, than to Lange himself.)

When we thus see that scientific psychology was made possible and some of the most important steps in its further progress were won through observations of pathological cases, we are justified in presuming that such a line of study also in the future will bring great results.

But even without taking these facts into consideration, we can see the great possibilities for psychology that a study of the pathological cases offers. As one very able writer of psychopathology, Störring, says: "The possibility of psychological experiment depends on the condition that a given psychical process stands in a relation of dependence to a physical process by which it can therefore be evoked. But naturally the more complex a process is, the less easily can we evoke it by physical stimulation and in such cases experiment meets with difficulties. At this point the study of the pathology of mental life must come in to assist, for in pathological cases nature makes experiments for us and they affect complex psychical phenomena far more than simple, since the relatively complex are of more frequent occurrence. Since nature in these cases accomplishes what normal psychology achieves by experiments, the observation of morbid phenomena has in mental pathology the value of experiment in normal psychology."

But also, if we look upon the study of mental abnormalities from the point of view of pure psychology, or descriptive psychology, it is of very high value. Just in the ^{re} same way, our attention is often called for the first time to some peculiarity in a person we know quite well, by a clever caricature of him, which exaggerates this peculiarity, so we can find forced upon

our attention one or another characteristic in a certain psychological complex by seeing it exaggerated under abnormal conditions. Where, for instance, can we find better opportunities for the study of anxiety or fear, than in the condition of morbid anxiety we so often find in cases with primary depression. Sometimes the physiological characteristics of the condition are the most prominent as in "Precordial Anxiety," sometimes the psychical, and we get, through these morbid cases, an opportunity to study the condition which we never would have otherwise, because it is extremely difficult to produce a genuine feeling of anxiety experimentally, and because it, even if we could produce it, only would be of very short duration.

What must now be the educational and personal qualifications of a psychologist who should be able to work in a hospital for the insane with any hope of success? He must have, first of all, a knowledge of the anatomy and physiology of the nervous system, both normal and pathologic, which should not, in any way, be less than that required of a physician graduating from a first-class medical college. He must have a thorough knowledge of the whole system of physiological-psychology, and be familiar with the methods of experimental psychology. Last, but not least, he must be thoroughly familiar with and have the most profound respect for the great principles of science which are the only sure foundation, not only for psychology, but for every kind of science. He must, for instance, always remember that the only way we can explain what we do not understand is by carrying it back to something we do understand. There is a sad lack of respect for this rule among a certain kind both of psychologists and of physicians. If it were not so, we should never see the "subconscious" or the "unconscious" used in explaining anything, as there is absolutely nothing we know less about, neither would we ever see used absurdities like "unconscious mental states." He must be a keen observer of men and their ways, a quality not especially developed by the whole methods of experimental psychology, the devotees of which often are so accustomed to have their instruments and experiments tell them everything that they

can see nothing without them. He should not only have gained his knowledge from books and laboratories, but should have a rather wide experience in the school of life. If he shall have any hope of gaining a real understanding of the working of the abnormal mind, his own mind should not be too even, but he should be, from his own experience, somewhat familiar with that state of mind which the great student of men, Goethe, thought about when he said "himmelhoch jauchend zum Tode betrübt." And, finally, he should have that sympathy for suffering humanity which alone can inspire in the patients that confidence without which his whole work will be entirely in vain.

If we then suppose that the superintendent of a hospital for the insane should be fortunate enough to secure for his institution the services of such a man, of what value would it be to the institution?

The psychologist would carry on his work from an entirely different viewpoint than that of the medical staff of the institution and this is just the reason why it might prove itself to be a valuable assistance to the medical work. Back of every effort of the medical staff is the purpose of finding means of curing the abnormal conditions that is the cause of the patient's being in the institution. And it can not be said with too much emphasis that with the treatment and cure of patients the psychologist can have nothing whatsoever to do. If he usurps for himself the right to treat abnormalities of mind, even if his treatment is only "psychological," he places himself in rank and file with all the other "quacks" who, in spite of the high standing of the medical science in this country, seem to have an easier hunting-ground here than in any other civilized country.

The right kind of a psychologist can, however, be of invaluable assistance to the psychiatrist in gaining a clear psychological understanding of the individual cases. His much larger knowledge of the working of the normal mind, his understanding of normal psychological functions through experiments and introspection, will enable him to find what function of the mind is affected and how it is affected in very many cases where it would be extremely difficult, if not impossible, for the psychiatrist.

Very much of interest can be brought out through psychological experiments on the insane, but to take up this side of the subject would require more space than it is possible to give in this limited paper. The psychologist will want to have a free hand to do his experiments and it will be the duty of the medical superintendent to keep him away from the very many acute cases where it would be very unfortunate to allow any kind of experiments.

All in all, it seems to me that while normal psychology may expect much from the work of trained psychologists in hospitals for the insane, the gain for the practical psychiatrist will be mostly indirect, consisting in a clearer psychological understanding of his cases.

Finally, before taking up my next point, I want to say that scientific psychology has no connection whatever with those persons who, with a "We alone know," written over their whole appearance and with an arrogance and a lack of respect for the opinions of others, unheard of among serious men of science, are trying to force psychology and psychiatry back to that time when mysteries as "unconscious mental complex" were "scientific" explanations and when the interpreters of dreams were looked upon as "wise" men. Those persons ought to array themselves in vestures of fine linen, put gold chains around their necks, and request for themselves the title of "Zaphnath-paaneah." (Gen. xli,45.)

Next we will discuss:

The Psychologist in the Institution for Feeble-minded.

The work of a trained psychologist in an institution for feeble-minded has already been tried for several years. The honor of having started it belongs to Superintendent Dr. A. C. Rogers, who, as early as 1898, engaged a physician with a special training in psychology to carry out psychological research. The first real systematic work in this line is, however, that started in 1906 at the New Jersey Training School for Feeble-Minded Boys and Girls at Vineland. The originator of the work was the Superintendent of the Training School, Prof. E. R. Johnstone, to whose profound enthusiasm and

unceasing energy the cause of the feeble-minded owes so large a debt. Prof. Johnstone was fortunate enough to secure as director of his Department of Research, Dr. H. H. Goddard, a man of rare scientific and personal qualifications. I do not think there is any one present who does not know of Goddard and the great work he is doing. There certainly is no psychologist working with the feeble-minded who does not look upon Goddard as his leader and teacher.

The scientific and personal qualifications of a psychologist in an institution for feeble-minded must, of course, be much the same as given before. Two points I want to say a few words about. As he will get his main work with growing children, he should have a thorough knowledge of normal children and their ways. Not that kind of knowledge that can be had through even the best course in "Educational Psychology," but that kind that only can be had through living together with children. The ideal seems to me that he should have spent a couple of years as a teacher in a boarding school. That he should have some experience in teaching is very essential, as his work for a great part will be in connection with the school department of the institution. Finally he ought to have worked for some time in a hospital for the insane. Only then will he be able to recognize those traits of insanity that, more or less difficult to distinguish, run through the woof of almost all defective minds and add their part to its peculiar pattern.

The work in an institution for feeble-minded is very different from the work in a hospital for the insane. With our present knowledge we must still admit the correctness of the old saying, "Once feeble-minded always feeble-minded." While, therefore, in the hospitals for the insane the work, first of all, has the purpose of removing the abnormal conditions of the patients, making it possible for them to go out again into the community as useful citizens, the workers in an institution for feeble-minded can only hope for that result in extremely few of his cases.

What can be done for the feeble-minded is to develop every faculty in them, if it is ever so small, and try to make them so useful to themselves and to the institution as is possi-

ble. In other words, the work of education and training is more important than the medical work.

Now, let us see how the psychologist can assist in this work: Most known is the assistance he can give in the so-called "classification" of the children. There is very much confusion in the classification of the mentally defective, and almost every writer has one of his own. The classifications used for the different forms of insanity and mental defectiveness are in the most cases not more scientific than the classifications of zoology were when the whale was classed as a fish. The only way to a scientific classification is through a more and more intensive study of the pathological conditions that form the basis for the mental symptoms. The classification of mental abnormalities is therefore the work of the pathologist and not the work of the psychologist. The classification which the psychologist is trying to make in several institutions is a practical classification with the purpose of dividing the children as to their possibilities for training. He does this through a very elaborate system of tests, which every one working with them is trying to make as efficient as is possible, (and these tests are used in almost every country where there is any caring for the mentally defective) through his observations of the individual cases, and through information from the different other officers and employes who have to do with the child.

I do not think the work has been tried in any place where it has not proved to be of very great value to the school. It saves time both for the teachers and the child, and what is still more important, it saves the child in many cases from being given a work which it can not do, and from the disappointment and loss of self-confidence in having to give up something.

But this classification, however important, is only the smallest part of the psychologist's work. If he has the necessary experience, and his laboratory is provided with the necessary instruments, he will be able to do much more. He will test the child's sight and hearing. If he finds anything wrong, he will refer it to the physician for medical examination. He will test the child's memory, its power of attention, its power

of imagination; he will make a careful examination as to what power the child can exercise over its different muscles, and so forth and so on.

Suppose that the wealthy parents of a feeble-minded child should die. Somebody would then have to be appointed guardian to the child. What would such a guardian do? I suppose that first of all he would send the child to a school for feeble-minded, realizing that it would get the best care there. Then he would make out a list of all the property left that child, and try in every way to develop every part of it that it might be as valuable for the child as possible. Now, what the psychologist of the institution does in his laboratory to the same child, by all his tests and experiments, is just making a list of all the mental properties in the child's possession, and when he has done that, he has still left the more important and much more difficult part of his work—to find ways and means to develop them and make them valuable to the child.

Through his examinations of the individual children, the psychologist will come in possession of a multitude of observations, and his object will now be to find characteristics common to all the children or to certain groups of them. If then, for instance, it can be shown—and I believe it can—that the most important characteristic of all the mental defectives is their lack of what we call attention, that it is impossible for them to keep their mind on the same thing for any length of time, that their mind, left to itself, is always wandering, then it must be evident that the whole educational work of the institution must center around that one thing, must have that principal purpose: to develop and strengthen this faculty in each child to the limit of its ability. And if it can be further shown,—and I believe it can,—that the common way of teaching is very far from doing this, that it does not take this important fact into any consideration, then I think the whole system should be changed. I, personally, would not for one second deplore such a change. The so-called "common school education" is idolized to a ridiculous extent throughout the world, especially by those having little or nothing of it. I, for my part, have never been able to see what good it can be

to a man to be able to read and write, if he has nothing to write about, and is unable to understand what he reads. It is furthermore a fact that the only institution that I know of in which they have eliminated almost all common school education, the one at Darenth, England, caring for more than 2,000 children, has gained results with their children unheard of elsewhere.

Such a change can, however, only be made gradually and very slowly in a big institution and it is absolutely necessary for its success that it be made with the hearty co-operation of all partaking in the work.

Another very important feature in connection with this special work will very naturally be assigned to the psychologist. I mean the study of the family history of the children. The problem of heredity and of its importance among the causes of feeble-mindedness is very great, very difficult, and possible results would have far-reaching consequences.

If this work, however, shall have any hope of accomplishing anything, there must either be required a much higher degree of accuracy in filling out the blanks of the institution, or there must be engaged the services of "field-workers," as they have them now in several institutions.

The Psychologist in an Institution for the Epileptic

will have almost exactly the same work as the psychologist in an institution for feeble-minded. The medical treatment of the epileptic is, however, so much more important than that of the feeble-minded, that it seems to me more necessary for an institution for epileptics to have a good pathologist and a well furnished pathological laboratory than to have an psychologist. The best, of course, is to have both, but I think the only way to a better understanding of the epileptic condition and to a possible cure is through pathological investigations, as these are carried out, for instance, at the Craig Colony in New York under the direction of Dr. Shanahan, and at the Monson State Hospital in Massachusetts, under the direction of Dr. Flood.

Also for

The Psychologist in the Schools for the Blind and the Deaf, there would be work of very much interest and of great importance for our knowledge of normal psychology. It would, however, take us too far to take that part up here.

If he were the right kind of a man

The Psychologist in an Industrial School or Reformatory would have splendid opportunities for doing very interesting and very important work. We know very little about the psychology of the so-called "criminal child." We do not know what role environment plays in the making of it, and what role heredity plays. Some are of the opinion that he is always mentally defective, others say that he is often extremely bright but has no "moral sense." I am inclined to think that they first are right in almost all cases, but we do not know. Painsstaking studies continued through a long time might, to some extent, solve the question. Then we would be able to take up a real fight against juvenile crime, and could anything be a greater blessing to the community?

Very many of the children committed to the industrial schools are there found to be mentally defective, and there is a continual transferring of inmates to the school for the feeble-minded. It is, however, only the most pronounced cases. It would certainly be a good thing to have an expert make a careful examination of all the children in these industrial schools, and, as far as possible, find out the defective. These children would be much better off in a school for feeble-minded, which is the only place where they can get the kind of treatment and training that they need and the work in the industrial schools would, I feel sure, be greatly benefited by getting rid of them.

A few words I would like to say about

The Psychologist in an Orphans' Home.

Our present knowledge of the development of the normal child after the time it has passed its babyhood is very small. In fact we have no reliable information whatever as to the mental development of growing children and very, very little as to their physical development.

It would be extremely difficult to find the right man for the work, but if he could be found and for some years would live in such an institution together with the children, measuring their physical development and testing their mental capacities from time to time, and first and last gaining their friendship and confidence, then we should in ten years have more real knowledge about children than we will get in a hundred years studying them as we do know.

The same result could be gained if one or more of the many splendid boarding schools there seem to be in this country could see their way to take on their staff a trained psychologist and give him time to do the work.

I hope now to have mentioned the different kinds of institutions where I think the work of a psychologist could be of use. Next I shall mention

The Psychologist in the Juvenile Courts.

Among all the great things the American people have to show visitors from foreign countries, I do not think there is one single one they ought to be so proud of as the juvenile courts.

I had not been in New York many months before I knew that the most wonderful thing there was not Brooklyn Bridge, nor "the skyscrapers," nor Fifth Avenue, but was the little old house down town where "the Children's Court" had rooms. I went down there with the idea that if I attended the sittings for a week or so, I could learn practically all there was to learn. I went there day after day for several months, and I saw that a court for children has more problems to wrestle with than any one man could hope to solve in a life-time.

The cases I saw there, and there were from fifty to one hundred and fifty a day, convinced me that every child who comes to court for more than trifling things, like playing ball in the streets, should be given a thorough physical and psychological examination. I am sure we would then come to another understanding of many, many cases, especially cases of truancy and so-called incorrigibility, than we now have.

Several people have asked me, when they have seen the Binet test, if it would not be a good thing if the probation officers in the different children's courts could learn how to

apply this test. It was their opinion that the probation officer then would be able to decide if a child was mentally defective or not. It can not be said with too much emphasis that this idea is nonsense. If you have a group of certain children, the Binet test can be of pretty good assistance to you in finding the relative intelligence of these children. But, in making a diagnosis of mental defectiveness in cases where there can be any doubt this test is of no value whatever. Such a diagnosis can not be made at all by any one not an expert, and it is often difficult even for him.

But now I must hasten to the end, and I shall take up the last subject I want to speak about.

The Psychologist in the Public Schools.

The daily routine work of the psychologist in connection with the public schools would, of course, be the examination of children sent to him from their schools. That part of it, however, will not require further comment, except to say that it should be carried out in close co-operation with a physician. One very important part of the psychologist's work will be the work of prevention. Through his examination and observation of a child and through his knowledge of its environment and family history the psychologist should be able to decide if the child is of neuropathic stock, and to give advice not only as to the right training of the child, but also as to the kind of an education which will be of the most benefit for it.

Nobody familiar with the common system of public school education can have any doubt that it involves an incredible amount of intellectual waste. You have seen how much the newspapers and magazines have written during the last few months about "scientific management in business," and the great saving there is expected from this source. I dare say that there has never been any responsible business where the waste of money could be compared with the waste of intellectual work found in the common school system. To find new methods and stop this waste will be almost the most important part of the psychologist's work.

No question is of more importance for the whole community than the one of finding the best way to educate the children.

The practical psychologist is like the gardener in an orchard. There must be enriching, grafting and pruning. Our present knowledge is very, very small. It will take much time, much work, and—much love for children in the workers before we will have any real knowledge. The child-problem is not only the most important one which we have, but the most difficult.

The psychologist who has not known children since he was a child himself, and who now studies them in books and laboratories, and is "a great authority on child-psychology;" the teacher who has taken a graduate course in "educational psychology," and teaches her classes after "the newest scientific methods," and is "a very prominent teacher," for such as these, the child problem is principally a question of time enough, laboratories enough, instruments enough.

The man who is neither an authority in child-psychology, nor in any other kind of "ology," who is not a teacher, much less a prominent teacher, the man who, since he was not much more than a child himself, has had no greater interest than his interest in children, who has lived with them for years as master in boarding schools, has worked with them in their "clubs," has been with them in courts and in ball parks, has tried to win their confidences and friendships as he found them summer nights in parks and winter nights in tenement hallways, *he*, sometimes, has a feeling of being lost in a wilderness. Sometimes he finds a kind of a trail, sometimes again, he has to cut one. But he does not lose his spirit. He knows that others will take up the work where he will have to leave it. Some day there will be a broad way through, and, in times to come, there will be, instead of a wilderness, beautiful forests and fertile land.

THE "COMMERCIAL" MEDICAL COLLEGE CALUMNY.

Medical Universities versus University Annexes.

The Reaction Coming.

The High School Preliminary Course Sufficient.

BY C. H. HUGHES, M. D.

St. Louis.

THE Flexner Carnegie Foundation report is responsible for this approbrious aspersion on the average meritorious independent medical college and some of our medical colleagues are thoughtlessly reiterating it, as though all of these worthy institutions, founded and maintained in professional uncompensated sacrifice of time and means, when without the profession neither the people nor their legislatures seemed to care whether the country had rightly instructed physicians or not, were unworthy. Notwithstanding this, a number of the universities have taken some of these so-called "commercial" institutions to themselves, either by gift or purchase, to make their medical departments.

In some instances the merger of certain of the mis-called commercial colleges has come about through free donation, after the medical teaching plants have been well established and often had become self supporting.

The medical department of Washington University is made up of two of these—the old McDowell-Missouri and Pope's St. Louis Medical Colleges, both independent schools once in the denounced "commercial" class, though all the commercialism in them was the worthy service and money given them freely by their faculties and friends and dedicated forever to medical education. The same is true of the medical annexes of the St. Louis University, viz.: the Beaumont and the Marion-Sims schools, which ought yet to bear their honored namesake's names, in commemoration of what these eminent and devoted medical men did for humanity and humanity's greatest of callings.

The origin, in fact, of all of the medical colleges of the United States, whether university annexed or independent of general university relationship, is or was, the medical profession.

The St. Louis University did, in part at least, purchase the Beaumont and Marion-Sims. There may be some few regular schools that do not mean well and it is true there are *some* few not adequately equipped in every department and there are too many irregular and quack diploma mills which ought not to exist and for which regular medicine is not responsible, but this vicious slander applied to the majority of regular ethical non-university annexed medical colleges, the children of the profession, founded in medical devotion to supply the need for medical instruction which neither communities nor states nor philanthropists would supply, until to some extent in very recent years, is a wrong against the best intentions of the best men of the best of the professions. We denounce this calumnious wrong and demand its retraction and correction. The entire American Medical Association should resent it. The A. M. A. should already have rebuked it and never have received it, especially after the slanderous report had been first given to the public.

The mere fact that a number of the profession's best schools (called commercial in the Flexner report) have been given free, after all the time and money spent to found and nurture them, is reproof enough against the aspersive term "commercial", as the fact of their acceptance by great universities also stigmatizes, with overwhelming proof, the injustice and medically disloyal design of this term applied in opprobrium of the profession's best work.

We all want broader and higher medical education but such epithets are not necessary to accomplish it. We want more condensed, better generalized, less diverting, more practical clinical therapeutics and physio-pathologic instruction for students, more efficiency available than now at the bedside and in the out clinic. Good moves in certain directions. Schools like Tufts and P. and S. of Boston, Kansas City School of Clinical Medicine, The Jefferson and Medico-Chirurgical of Philadelphia, The Barnes of St. Louis and many

similar independent schools make good doctors and they are as necessary as the hotels we have in this big country.

As well stigmatize the new university adhesions as mendicant medical colleges because they accept the commercially acquired charity of millionaire donors.

It is not necessary to besmirch what we, as a profession, have so long and assiduously toiled for and accomplished, namely: professionally managed medical schools for subordinate positions in a few larger general universities more or less governed by non-medical men and ideas, because the outside philanthropy of millionairism has chosen to endow only big general educational establishments with medical college annexes thereto.

These are good for research work, especially, to the utmost limit and for the making of chemico-biological, pathological, bacteriological, hematological expert workers, etc., and the more and better endowed these are the better for science, medicine, sanitation and philanthropy. But it is not necessary to drive all the profession's best schools out of existence or for a single state examining board to antagonize them, nor for a single state medical journal to traduce them, nor for philanthropists to ignore them, as is being done in some directions. The independent medical school is the legitimate offspring of the profession. It is not yet ready to die or be step-mothered everywhere in the country or step-fathered by the great general university as though it were an orphan of professional neglect and misfortune. It has grown and flourished despite popular unconcern and has been considered good enough for adoption into the great general university and no question as to paternity asked and for making great medical men.

The great universities may be made advantageous in respect of developing ambition to become special experts in medico-scientifically inclined young men, who may wish to go to the greatest and best of universities for the highest possible attainable technical collateral medical knowledge and may be more, but they have not heretofore made the greatest and best of the physicians who have adorned the medical and surgical professions of our country.

The medical profession should not give up all of its in-

dependent medical schools and should resent the false term "commercialist" for doctors who belong to or foster them and as a rule, make nothing out of them and philanthropists should sustain the best designed and conducted of the independent medical schools as the profession has done, is doing and will continue to do. The independent medical school should have all the necessary medical university features for the best and highest medical training.

Besides teaching clinical medicine, therapeutics, pathology, biology, hematology, bacteriology, chemistry, anatomy, etc., as needed for diagnosis, prognosis, therapy, etc., it should teach comparative philology with Greek and Latin radicals in such a way as not to require two extra years in college for what the medical student should know in rudimentary Greek and Latin, in order to easily and thoroughly comprehend the medical lexicon, with this necessary saving of time. He should know analytical philology for its help with the medical lexicon. He should also know psychiatry in a way to fit him for the psychopathic hospital practice, as Great Britain is now doing. But the teaching of psychiatry is not mentioned as specially essential in the Flexner foundation report, if at all.

Life is too short and the art essential to success too long, for a student to be required to live more than twenty-two or twenty-three years before beginning the practice of his profession. The sanitation of his mind is likewise to be considered in the long wearisome detail of technical laboratory instruction proposed in some quarters, to be thrust upon him to the destruction of his psychic neurone bouyancy and power of healthy normal thought rebound.

All things may come to those who wait, but aspirants for livelihood earning positions in medicine, ought not to be compelled to wait till the fire of ambition dies before letting them into our life serving and life saving profession.

We know of no more worthy matter for the A. M. A. to consider than the creating of a great practical medical university with its hospitals, clinics, research and therapeutic laboratories—a real medical university reaching out for and applying everything in science and natural resource essential to the disease combating and preventing practice of medicine.

This grand and rapidly growing country is too great for a single Sarbonne, a Heidelberg or a Berlin University or for a Cambridge, Oxford, Columbia, Yale, Harvard, Johns Hopkins, with the latter's commercial endowments, its Virginia, Pennsylvania, Ann Arbor, California and Leland Stanfords, Vanderbilt and Rockefeller universities, the three latter also commercially endowed institutions, are doing well for their respective areas of influence, like the Iowa, Michigan, Minnesota, Missouri, Nebraska, Texas, Oklahoma institutions, but they and others like them, will not do to supply the entire country's need during the coming years in medical education and advance. Our young men and women of moderate means who contemplate medical study and cannot go far from home must be provided for. The great universities may give finishing scientific and literary touches to the financially full-handed, but cannot to all students.

Professional pride in medical education for the welfare of medical students has not vanished from the hearts of medical men and it will not die. The reaction is on for real medical universities, with all the essentials for a thorough education in all of the allied sciences tributary to medicine, taught with a view to the essentials of practical medicine—that is the curing of the sick. Philological Greek, Latin, etc., should be taught, but without curricula of tedious detail in other matters that require near a life-time for acquisition and tend to kill ambition for engaging in that part of the world's work designated the *Practice of Medicine*, i. e., the mastery and cure of disease.

The practice of medicine, though allied thereto and in a measure helped by it, is somewhat also a thing apart from minute detail, persistent all-time requiring laboratory work. The marvellous advance in contributory scientific research work concerning the human organism, its movements and mechanisms of control, is developing a large class of worthy, assiduously working laboratories as a special class of medical aids, if we may call them such, and they should be encouraged in the large universities having superabundant endowments and their results made use of for instruction, diagnosis and therapeutics.

But smaller schools in every state and territory, schools

conducted by the profession for the profession with the kind of efficient teachers President Murphy of the A. M. A. insists upon as essential. The personnel of the teaching corps is the thing to utilize all really available laboratory revelations for clinico-therapeutic results.

The quality, capacity and instruction imparting qualification of the teaching faculty of a medical college is quite as important as its laboratory work and workers. Neither ought to be dispensed with. But the teacher who teaches is the thing in our work of vital conservatism and salvation.

We need for our medical schools an improved, true, comprehensive and rational pedagogy. Medical students are but children of a larger growth and their instruction should be suited to the students' developing capacity. Teaching should be devised and conducted so as to not substitute psychatonic cramming for a rationally digestible mental dietary. The special intellectual *menus* of some of our present day medical schools is appallingly extensive and so diversified and minute as to develop a psychasthenia like paresis as we have personally seen, as a teacher of many decades of teaching.

We are far from a rational psychic sanitation in our demands upon the time and attention of our medical students. The capacity of the best inherently endowed, is not unlimited. The brain is not a perpetual motion mechanism and those with any inherent neuropathic tendency or brain energy exhausting side strains in their habits, succumb too frequently, under our present rush system, to the mental overstrain of college demands, including those vicious habits in some that add to the strain and break of psychic and lower center neurone integrity. Some of them live too much above the manabrium of the sternum and some too much below the umbilicus. To put it plainer too much above the collar and below the belt combined for their best welfare at college.

The need of doctors is not yet duly appreciated, as for all police courts, the slum districts of cities, railway trains, hotels, markets, etc., for enforced sanitation, sanitation of ship ports and ships, food sanitation, abattoirs, dairies, candy, fruit, vegetable and butcher stalls, all canning estab-

lishments, etc., and even private houses. When perfect sanitary intelligence shall have spread among the people they will demand medical inspectors who can use microscopes and see and do things for the popular sanitary welfare and these will demand practical medical schools for the thorough making of real working doctors who know what to do, how to do and who *will* do for the public weal. The best medical men for this service, though good men may be and are made there, are not most likely to be made at the far away ordinarily inaccessible great universities, away from the ordinary home high school graduate and the high school is ordinarily a good enough foundation for the study of either medicine or law, as with it can be generally attained a rudimentary Greek and Latin philological knowledge such as will make the medical lexicon an easily familiarized book.

The psychic sanitation for the saving of the race has only just begun to be thought of and the teaching of a sound psychiatry with a chair and department in our medical schools, though not mentioned, as we have said, nor advised in the Carnegie foundation report yet in force in some of the schools derided in this report as commercial ventures, have taught this subject for decades, will become as common, under enlightened popular medical demand, as the unwise omission of examinations in therapeutics are in evidence in too many state examining boards, omissions made under outside pressure which never should have been acquiesced in by regular medicine, for regular medicine is the rational treatment of disease. All other matters are subsidiary to it.

A physician addressing the public under the auspices of the A. M. A. lately "declared that medical schools not affiliated with a university could last but a few years more." In his opinion, medical schools should be under the control of universities.

"Public opinion is proving a great aid to medical education and showing our system is antiquated and bad," he said.

"And such schools were paying institutions, but he believed the time had arrived when the expenses attached to a medical school were too steep for any but university schools."

Such statements do not reflect the general sentiment of

the American medical profession. They are the narrow conclusions of a novice and amateur university attachè. They should not have been uttered under auspices of the A. M. A. public enlightenment course because opinions are not united on this subject.

The average medical school of previous years has seldom if ever been a paying one in the sense of personal emolument to its faculty or management. To the honor and glory of their promoters and maintainers, mostly medical men, tuition receipts from students, excepting such sums as were paid faculty members who gave their whole time or nearly so, except in anatomical, chemical and biological departments and to the curator of the museum, went into betterments of buildings and equipment and the results of such increments of some of them are shared now by certain universities to which certain of these misnamed and traduced "commercial" colleges attached themselves as free gifts.

The following excerpts from the report of the superintendent of instruction of the St. Louis Public Schools will more than suffice to illustrate as to the adequateness of high school instruction being sufficient as preliminary for the medical student's foundation without the added two year college requirement.

They include algebra, geometry, trigonometry, Latin and Greek through Cæsar and the Anabasis, coarse anatomy, physiology, physics, botany, biology, etc.

We believe that some who demand the two years college course as an absolute essential preliminary to medical study for those who have gone through the high schools, especially of St. Louis and Missouri, do not know how much preliminary foundation knowledge can be acquired in the modern high schools.

The better non-university attached college, growing with the growth of science and broadening and advancing with the increasing enlightenment and patronage of the profession and its proudly guiding hand and fostering care will last forever. It will be a medical university *sui generis* managed by medical men for the making of medical men and for practical healing

resource for the people with or without literary university alliance as circumstances may decide.

Every man who can should have before or after medical graduation as broad, high and complete an education as may be within reach of his acquiring.

No man can know too much if he does not break the integrity of his brain in the acquisition, for with all his gettings he should get understanding and even then wisdom will not die with us, as it certainly did not greatly live with the free counsellors of the troubled old man of multiple afflictions, in the unhappy land of Uz.

NOTES ON THE HISTORY OF PSYCHIATRY.—IV.¹

By SMITH ELY JELLIFFE, M. D., Ph. D.,

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(Continued from page 314, May, 1911.)

IN my previous communication I began the translation of Falk's "Studies in the Psychiatry of the Ancients." This is an extremely valuable bit of work and I shall continue it at this time, hoping to complete it in a later communication.

FALK, PSYCHIATRY OF THE ANCIENTS.

Further in the popular speech of the time the words "crazy" and "insane" were used, and certain writers used the expressions mania, amentia, vesania, for the most part without any distinction,² yet again they described different forms. Oldest traditions describe melancholias, (Bellephoron for example.) Lyncanthropy, which we at the present time still regard as a form of melancholy, is often spoken of and on the other hand we meet with tales of misfortune, which lead to the most violent attacks of frenzy, as in the case of Orestes,³ Athamas and Ajax, whose insanity brings them and their relative to sacrifice. Further it may be mentioned, that a few later authors, Morel for example, find in the tale of the daughters of King Proteus an indication of hysterical insanity; this latter author seeking to explain several strange occurrences of ancient and other times on the grounds of hysteria. Although I still believe that the story of the elder Brutus is one of simulated insanity, it

1 Preceding numbers appear in Feb., 1910, Feb., 1911, May, 1911.

2 Cicero is to be excepted. He attempted a nomenclature to which we shall return.

3 Orestes is described as a sick man whose psychical disturbance is associated with convulsive attacks.

may be noted, as partly belonging here, that the oldest historians have remarked upon the frequent occurrence of suicide in certain periods. To those belong the tales of Plutarch and of Apulius concerning the epidemic of suicide among the maidens of Miletus, and the death-agony of the Roman republic, with its signs of moral corruption, was marked by fearful numbers of suicides, which fact is not lost sight of in spite of Cato's attempt to attribute noble motives to the same.

The causes of insanity were sought by the majority in the anger of the gods, and recovery was valued as a gift from the reconciled divinity.

What can be learned of the treatment of mental disease from non-medical authors of ancient time is somewhat as follows:

It is frequently mentioned that a cure for mental disturbances exists within the hellebore.⁴ We shall again meet with this remedy as an important link in Hippocratic materia medica. "Ripe for Ancyra," where the hellebore grew, was an every day saying as indicating a candidate for an asylum.⁵ and Sebastian, (*Bemerkungen ueber die Melancholia und Mania als Nachkrankheit bei Wechselfieber*, in *Hufelands Journal*, 1823), calls attention to the humorous lines in Horace (Epist. II.) where a patient cured by hellebore complains bitterly of having been deprived of his sweet delusions.

It had been common from the earliest times for the insane, just as other sufferers, to be brought to the temples or other holy places to obtain by prayer a cure from the gods. Renouard⁶ pointed out the fact that the dietary regime which they here had to undergo, the protection from bad weather, the change from the accustomed life, the miraculous cures which they witnessed and which filled their mind with lovely pictures and thereby acted beneficially upon their malady, that these were the healing formulæ of the priests.

At all events, one can see that the common people never

4 Of the not inconsiderable literature concerning hellebore I mention S. Hahnemann. *Dissertatio de helleborismo veterum*. Lips. 1814. Ribbeck, *De Helleborismo veterum*. Berol. 1841.)

5 Arnold, p. 15.

6 *Historie de la Medicine depuis son origine jusqu'au dix neuvieme siecle*. t. I. pg. 87.

looked upon the insane as objects of horror, but rather held them worthy of religious awe and reverence. What a contrast to the terrible conditions, which most of these unfortunates had to suffer during the middle ages and even in more recent times.

But now let us turn our attention to those men, who either as a result of their professional duties as physicians have recorded the results of their experiences in imperishable books, or who primarily as philosophers or natural scientists have included medicine within the circle of their ingenious researches.

But I must first remark that I shall not discuss at length their psycho-physiological theories, as Michea,⁷ for instance, has attempted to do in several striking contributions, nor shall I discuss so minutely the opinions of the ancients concerning the location of the soul, as Lelut has done with great erudition in the same place. I shall preferably throw light upon the practical side, speaking only very briefly of the therapeutic methods, so far as they utilize remedies which play no part in our *materia medica*.

Classical antiquity, as we shall prove, has laid a good foundation for the temple of psychiatry. Every one of the great physicians who have been models for all times, and some more than others, has helped in its construction. Let us then study what experiences each has gathered in this field and what point of view each has made his own. When we have looked over all of their pertinent writings, we can try to form an opinion upon the amount of knowledge and the value of the accomplishment of the respective authors, without being over generous when praising nor yet too censorious. And when we have passed the whole series of writers in review, let us consider what general point of view can be gained whereby ancient psychiatry can be judged and which questions force themselves upon us and permit of an answer, in the study of the same.

The pre-Hippocratic times have not been without importance in the history of medical doctrine, for it is certain that the philosophical doctrines of Thales and of Pythagoras have been of influence in the formation of the systems of later

physicians. For our purpose they are of less importance since the fragmentary notes of the times hardly show more than a general observation concerning the condition of mental health. It should be pointed out that Pythagoras recommended to his pupils a moral life, moderation, abstinence, occupation with music, as a kind of mental gymnastics, apt to strengthen the mind and to protect from error, whereas he describes drunkenness as a poison for the mind and the path to insanity. Alcmaeon of Croton, who was the first⁸ to pronounce the brain as the seat of the soul, does not add, however, that the same organ is also the seat of mental disturbance.

At all events one can truly say that one seeks in vain for useful practical remarks in Pythagorean philosophy.⁹

And so we come to the father of medicine. Let us examine if, as in other branches of medicine, so also for psychiatry his writings will stand as foundation stone, as points of departure for all research.

I am not the first commentator on Hippocratic psychiatry. Its value has been recognized for years, nevertheless I think it necessary and useful to give a thorough review of the most important features.¹⁰

I shall not hold myself too strictly to those books of the Hippocratic collection, concerning whose authenticity the older and newer critics have agreed, but I shall take into consideration the whole collection available to us.

While some of the non-Hippocratic books, even those probably written by Aristoteles and Praxagoras, as *περι καρδίας*, *περι σπλινος* and others, are quite insignificant for our purpose, yet others, as *περι ιερης νουσου* contain much that is important. It may at first be permitted to call attention to some difficulties which confront one who would obtain from the Hippocratic works the psychiatric knowledge of the author. In this collection we possess no writings ex-

8 Not Philolaus, as Morel (Op. citat. pg. 3), declares. According to the opinion of Galeno (*peri philosophoni sorias*) the Pythagoreans chiefly believed the heart to be the seat of the vital power, the brain as the organ of *logichon chai noeron*.

9 At least I have not found in Unna (*de Alcmaeon e jusque fragmentis*) nor in Wedekind (*Der Pythagorische Orden*) anything that belongs here.

10 In addition to the monograph of Nasse cited, that of Döring (*Dissert. Hippocratica doctrina de deliriis*. Marburg, 1790, is also a thorough one.

clusively devoted to mental disturbance, although some books, such as *περι ιερης νοουσου* offer us more material than most of the others. Therefore, we have "dissecta membra," out of which it is not easy to form a whole. In addition we find different forms of disease mentioned from whose names alone we can obtain no distinct ideas of their nature. We meet many expressions to signify delirium and insanity which Friedreich has already brought together.¹¹ Although Nasse has made an effort to pierce this labyrinth, nevertheless we are not justified in giving the words specific meanings, which shall obtain throughout all of the writing. The *μελαγχολια* of Hippocrates does not always mean the so-called melancholy of our present classifications, but corresponds for the most part to the Hippocratic teachings of the four juices¹² where a preponderance of black bile causes the various constitutions, even inducing mental disease. In many places melancholia can be conceived to be the melancholia of the present day. [1866.]

Μανη also does not correspond always with our mania and is used in several cases only as a general term for mental disease. By reason of the variety of terms and the differences in their meaning a source of error lies in the fact that there still remains a large collection which is certainly not the work of one author, even after eliminating the pseudo-Hippocratic books. I would like to say the same for the psychiatry of Hippocrates as Virchow¹³ has remarked concerning the Hippocratic doctrine of tuberculosis. "What could be more natural than that the ideas which are not sharply limited should be expressed differently by different authors and that also many different things should be called by the same names?"

Moreover it is very difficult to distinguish in the few places which deal with mental disturbance whether a chronic insanity, or an acute mental disease, or only a fever delirium, such as often occurs in acute diseases, is being described. I must confess that I feel inclined to assign to the last very many

11 Versuch einer Literär Geschichte, [already translated, see notes No. 1, Jelliffe.]

12 These are especially devoted in *peri phusios andropon* 3.

13 Phymatie, Tuberkulose und Granulie, historic critical study. Archiv., Sept., 1865.

of the points which to me were at first doubtful. Hippocrates seems to have met with many such constitutions in whom even a comparatively slight illness was sufficient to cause delirium. He recognized that such natures, which, following him, we also recognize, even in healthy days offer many striking signs which approach close to insanity. *Εγγισα μανης*, he therefore calls these individuals *υπομανομενοι* (hypomanics.)

When we bear in mind these circumstances and at the same time avoid finding more in the text than there is contained therein we obtain the following:¹⁴

From the description of the appearance, significance and termination of the fever delirium, I shall first show that, according to Hippocrates, the origin of the same was not infrequently anaemia and inanition, in which latter case the prognosis is unfavorable¹⁵ when the case is accompanied by high fever. A special therapy is not recommended. Besides this we read of another disease, *φρενιτις*, whose name already signifies that an affection of consciousness, *φρενες*, is one of the most prominent symptoms. According to Hippocrates this is the most characteristic feature. A much more decided expression of this opinion is found in his successors where phrenitis is allied completely with the acute forms of mental disorders.

The phrenitis of Hippocrates was subject to so many different interpretations, especially by the ancients, that one can say of it what Hirsch has said about the plague of Thucydides.¹⁶ It was the Koran of medical historians; everyone found in it what he was seeking for. The majority failed in their attempt to read from the description of the ancient a definite disorder well recognized at the present day. Many will agree with the interpretation of Littré, according to whom the phrenitis of Hippocrates represents the acute infectious diseases, which are reported to us from the southern climates. At all events we must give this opinion some attention.

14 With reference to this many commentators of Hippocrates have erred and the risk to which Virchow in his special branch recently referred to has made me careful; therefore I shall frequently use the original text.

15 *Αἰ ἐχ τιροεξιδυνεσαντον παρα φροσυναι εχοεχον. Prorretichon. I. 8 Koach. progn. 1. 99. Paraphrosune seems to pass better as a specific name for fever delirium.*

16 *Handbuch der historisch-geographischen Pathologie, Th. 1. pg. 335.*

The descriptions of the disease are to be made out through the numerous observations, scattered throughout all of the books of Hippocrates.¹⁷

Phrenitis is a primary affection, but can accompany other acute diseases, especially when it proceeds directly from the fever delirium. Headaches and chills are the forerunner of the fever. Consciousness is affected very early and in the unfavorable cases, which seem in the majority, remains clouded until death. The patients are in a stupor. One often notes picking at the bed clothes. There is no desire for food, but restlessness, violent agitation, furious delirium, preceded by sleeplessness and lively dreams appears. In many cases there are accompanying convulsions and muscular twitching. The fever is high, the tongue is dry and fissured and the voice monotonous and colorless. The faeces have a bad appearance. A slight exportation is more favorable. Phrenitis appears more often in winter, and in epidemics, as at Thases. Adults and certain constitutions, especially the *μελαγχολικός*, are more apt to be attacked. It runs a critical course with active perspiration, leading to recovery; sometimes showing a fulminant course. It seldom extends over a period of eighteen days. Chronic insanity and other kinds of diseases, especially nervous, may remain.¹⁸ Death follows in most of the cases, following a general drop in the temperature.

The pathogeny and therapy represent the general Hippocratic notions concerning mental diseases to which we shall return.

So far as the name is concerned, it would appear in that for example in *περι παδων*, *χ'* the pain in the hypochondrium, (particularly in the right side), is expressly spoken of, that the same would indicate an affection of the diaphragm. This does not, however, directly explain the condition of the sensorium.

If from these hasty sketches we would formulate a disease picture familiar to us, we have first of all to consider that such a transposition to our present day classifications is always

¹⁷ Little's edition, Paris, 1861, of Hippocrates is used throughout.

¹⁸ Deafness as a complicating disease, the Epidemics, VII. 71, in several places paralysis.

somewhat hazardous. Certainly Littre's explanation that of a form of typhoid modified by endemic conditions seems plausible; yet according to the Hippocratic picture, (still more that of later authors) the thought of a meningitis, (whether of the convexity or of the base, whether tuberculous or epidemic, remains undecided), cannot be rejected, even though it is not quite demonstrated. In many places the physical symptoms are so secondary and the mental symptoms appear to such a marked degree and in such a form, that one is involuntarily reminded of the mental disorder described as acute delirium by modern¹⁹ writers.

At any rate the apparent frequency of phrenitis is in very marked contrast to the frequency of occurrence of the two supposed modern representatives and is to be explained with considerable difficulty.

And now we come to the chronic mental diseases.

Briefly referring to the Αφορισμ., vi, 23, in which it is simply told: "When sadness and anxiety continue for a long time this is a condition of melancholy; μελαγχολία ου το τοιούτον" we come to the description of hypochondriasis, which we find in *περι νουσων*, lib. II, 72.

The words of the text, after discussing the φλεγμα λευχον, (leucophlegma) are as follows:

In the Littré edition²⁰ this is translated as follows:

(Hypochondria) Cure. Difficult disease. The patient seems to have in the viscera like a thorn which pricks them; anxiety torments him; he shuns the light and mankind, he loves the shadows; he is a prey of fear; the diaphragm sticks out, it makes him sick when one touches him, he has fear, he has terrifying visions, frightful dreams and at times he sees the dead [only part of the section, that which follows, is clearly therapy.]

Φροντις νουσος χαλεπη δοχρει εν τοις σπλυγχνοισιν ειναι οη αχανθαι και χεντσειν, και αση αυτον λαζεται και το φως φενγει και τους ανθρωπους, και το σχος ψιλει και φοβος λαζεται και αι φρηνης οιδουδιυ εκτος και αλρει ψαυομενος και φοβειται και δει ματαρα και ονειρχτα και τοος τεθυηχотας ευιοτε.

19 Here modern refers to the 60's, when this paper was written.

20 Littré, *The maladies*, II, 72, vol. 7, pg. 109.

While here on the one hand the abnormal physical sensation, the hyperaesthesiae, which are compared to the prick of a needle by the patient, are described. [By projections of the φρενες (diaphragm), we understand the swelling of the abdomen.] The abnormal psychical behavior is expressed by anxiety, shunning the light, misanthropy, angry dreams, the seeing of ghosts, etc.

A consequence of such fearful state of mind is mentioned in "The Places in Man" (Litrè, VI, page 329), where the treatment of a melancholiac with tendency to suicide is prescribed with great exactness; here we find the description of melancholiacs who have been affected by suicidal ideas.

A similar effect upon a hysterical basis we find in the book, *περι παρθενιων*, probably not from Hippocrates himself, but at all events composed before Aristoteles. While in that place the contingency is expected to follow from the ascending of the womb, thereby injuring the diaphragm and activity of the heart it is said:

εχοντων δε τοντωνωδς, υπο μεν της οξυφλμασις μαινεται, υαοδε της ση πδονος φονα, υπο δη τονζοφερου φοβεσι ται, δε δοιχεν, υπο δε της περι την χαρδιην πεεζιος αγχονας χοαινουσιν.

(Litrè, vol. 8, page 469.)

The thing being thus she is transported by reasons of the acute inflammation, wishes to kill herself because of the putridity, fears and shivers, by reason of shadows, the desire to strangle herself because of the pressure about her heart.

Here praecordial anxiety, in addition to its further results due to mechanical disturbances of respirations by swelling of the uterus, is described. Further we read:

φοβερα ονομαζει και χελευουσιν αλλεσσαι και χαταπιπτεινα ταφρευοιτοι και αγχεσθαι, ατε αιμεινονα τε εοντα χρειην εχονιοιπαν. Τοιην οχοτεδε ανεν φαντασμων, ηδονη τοσ αφ'ης εροι τον θανατων απερ τιнос αγαδου.

(Litrè, vol. 8, page 469.) The intimate senses, trouble and anguish, by reason of the perversions of the blood become perverted in their turn. The patient says the most terrible things. The visions order her to go out, to throw herself in the well, to strangle herself, and as having all kinds of utility.

It is interesting that the author has recognized hallucina-

tions, φαντασματα²¹—here hallucination of hearing—as cause of many otherwise mysteriously appearing words and actions of those suffering from mental disease.

Of multifarious hallucinations as the principal symptoms of an acute delirium, we read in περι των εντος παζων 48 προφαινεοδοι οι δοχαι πιρο των οφζαλμων ερπετα και αλλα παντοδαπα ζηρια και οπλιται μαχομενοι και αντος εν αντοις δοει μαχεσζαι και τοιαντα λεγει ως ορειων και επερχεται και απειλει ην μη πς ανιον εη εξιενι, χη'ν αναστη ον δυνατοι αειρω τα οχελεα αλλα χαταπιπει.

(Littré, vol. 7, page 285.) When the liver presses upon the diaphragm he becomes delirious. It seems to him that there are snakes before his eyes, armed men who fight, he himself fights in the middle of them, and he speaks as though seeing combats and wars. He raises up, he menaces if one does not allow him to go. Standing up he cannot raise his legs, he falls.

Further it is told: Then if the patient ceases to be delirious, immediately his consciousness returns, and if questioned, one receives a correct answer, but soon he falls back again into the affliction. As one further reads, that this peculiar disease especially attacks travellers, and especially such who wander through a desolate country, ην ερημηνοδον βαδιζει, the complete harmony with the description, which the traveller d'Escayrac de Lauterre has sketched in our own times,²² on hallucination of the desert and which have been reproduced by A. Hirsch (2 Op. citat. Bd. II. 561.) Hippocrates has further observed that this affliction is mostly curable; it rarely ends in death.

If we now search for a description of mania or related disease pictures, it is very difficult to decide from the words of the text, whether we have only a fever delirium or a form of exaltation, in the sense of our present day mania, and it is all the more difficult since the brief descriptions in some of the books, as in προρητιχον, the Κωαχα προγυ ωσις and of the Aphorisms does not help us to decide.

21 This word appears in the Hippocratic writings to signify not only hallucination but also dream pictures.

22 Memoire sur le rage ou hallucination du dessert.

If we should once more consider as true mania, the few references in which nothing is mentioned about a primary disease, and which cannot therefore be considered as a fever delirium, the sudden appearance and disappearance of the symptoms, as they are here described, forces us to regard it in the light of a transitory mania.²³

At all events no such striking picture of mania is given as of those of hypochondria and of melancholia. Of these cases in which a raving madness is mentioned, without there being any organic disease present, I shall only call attention to a case in *πρորρητικον*, I, 17, where the wife of one Hermazygos, after a violent attack accompanied by rolling of the eyes, terrible screams and vomiting, lost her speech and died. As nothing is said of convulsions, the case can hardly be reported as one of epilepsy.

At this time I shall note that delirium tremens was not unknown to the physician of Cos. The words of *Dieta morb. acutorum* refer to it.

It is there referred to as an acute disease: *ειμελαγχολιχωση η εχ ποσιος φειρες, χαλως εχει παραφροσυνην προειπειν ν οπαουν.*

If one regards both symptoms: trembling of the hands and delirium together, the diagnosis of alcoholic delirium is simple, as *Littre*²⁴ has also shown.

The influence of drunkenness as a cause of insanity was also known by Hippocrates and he considers the latter as very serious.²⁵

Without affiliating them with the cases already described, Hippocrates, in his book on diet, describes as *ηλιδιοι* those individuals in whom the circulation is heavy, in consequence of which the mental grasp is slow. *χισδχουονχι και οι τοιοιτοι ουδεν ησπον οιον των τοιοντων οχουα δε δι' οψιος ν αχουης αιδβανεδβαι δει, α μη τιροτερον επιστανται, ου δινα υται αισδανεδβαι.*

23 This word is probably used in the sense utilized by Kraft-Ebing who two years previous to the appearance of Falk's paper, 1864, published his monograph on *Sinnesdelirien* and in 1865 his dissertation on *Mania transitoria*, while in 1868 he published his *Transitorisches Irressein* with a chapter on *mania transitoria* (pg. 76.) [J.]

24 Argument to chapter on acute diseases, II, p. 382.

25 Aph. VII, 7, *Echpoluposies rigos chai paraphrosune chachou.* [A rigor and delirium from drinking are very bad.]

According to this, these individuals represent our feeble-minded and imbecile. But nothing can be found in the words nor in the connections to indicate whether this feeble-mindedness is congenital or acquired. In contrast I should like to conceive as cases of exquisite melancholia those spoken of in the same chapter, as suffering from *μανιη επι το βραδυτερον*, those who fear that they will be harmed, without anyone annoying them by word or deed, and where no ground exists, and who really do not comprehend things as mentally healthy people do.²⁶

In addition to these more or less developed forms, according to Hippocrates, there are also certain dispositions to mental disease. This is true for certain individuals though not definitely insane, (sometimes they never get so far,) yet nevertheless show a very excitable nature, and are often readily stirred to wrath, others are very peevish, reserved, apathetic,²⁷ In some even a slight illness will involve²⁸ the nervous system and the patient will show a mild delirium (phantasies). The theory which Hippocrates builds upon these observations is closely related to his general conceptions concerning mental constitution and disease.

We have already seen that a Pythagorean has placed the seat of the mind in the brain. Hippocrates speaks of this further in *περι ερης νουσου*, No. 14. "Remember, that pleasure, happiness, laughter and fun, as sorrow, grief and displeasure can only be perceived through the brain; through this organ we think, comprehend, see and hear; through it we know the good and the bad, we distinguish between the beautiful and the ugly, between the pleasant and

26 I shall here briefly reproduce two cases, which because of insufficient development, are not of particularly great value. The first refers to a youth, who whenever he sat at rest at a banquet became so affected by the sound of a flute, that even at the first sound he was overcome by severe anxiety. If he heard the instrument in the evening he could hardly keep quiet; during the daytime he had no such disturbance. A friend of his found it impossible to stand on a cliff, or a bridge railing, or go near the edge of a grave, for fear of falling down. Both observations, as noted, are too superficial to permit one to decide whether these peculiarities, this irritable weakness on the part of both men, is still within the limits of healthy mentality.

27 According as black bile or mucus prevails in their disposition.

28 As it for example may be caused, through a mistake in diet, among others in abundant eating of meat.

the disappointing." Then he continues further: πω (scit. εχξεφαλω) μαινο μεδacha: παραφρονομεν fury and insanity, also, proceed from the brain, with their general symptoms, bad dreams, false ideas, groundless worries, analgesian misconceptions of the surrounding conditions.²⁹

29 Ageosin ton chadesooton.

(TO BE CONTINUED.)

SELECTIONS.

CLINICAL NEUROLOGY.

CONTUSION AND CONCUSSION OF BRAIN. INJURY WITHOUT FRACTURE.—Microscopical technique formerly did not permit us to distinguish the lesions which accompany concussion, and yet such lesions do exist, and it might be said that there is but a question of degree between concussion and contusion.

Concussion of the brain is characterized by a sudden cessation of the functions of the nerve centers,—namely, (1) The abolition of the mental faculties; (2) the suppression of the motor and sensory functions; (3) interference with vegetative life, which may be arrested temporarily (fainting) or permanently (death). All these occurrences are more or less dependent upon the intensity of the shock.

These severe, sometimes fatal, results of concussion are determined by a minimum amount of lesions. For a long time it was thought that such cases were due solely to the inhibition of the functions of the brain.

Little, in the year 1700, made an autopsy on a prisoner who had killed himself by jumping head forward and hitting a stone wall. At the autopsy, no lesions of the brain could be discovered. This case was partly the foundation for the theory that a concussion of the brain could inhibit the cerebral centers. There must be some lesions, however, in concussion, and since the use of Golgi's method certain changes of a degenerative character have been noticed after concussion.

How do these lesions take place? Are they the result of a reflex anemia of the centers, as Fischer believes? Do they result from a shock to the brain mass, transmitted along the wall or through the medium of the cerebrospinal fluid, as is

claimed by Duret? Possibly the various methods suggested combine to produce concussion, but the essential point to be remembered is, that this very marked disturbance in the functions of the brain is accompanied by more or less pronounced lesions, the nature of which is unknown. Cerebral contusion represents another degree of injury beyond concussion. When it is not accompanied by fracture its mechanism is exactly the same as that of concussion. Contusion is characterized by small hemorrhages, usually of a miliary type, and by destructive lesions. The symptoms of contusion are exactly the same as those of concussion, with this difference, however, that the destructive lesions sometimes are followed by permanent paralysis after the primary symptoms have subsided.—*M. Marcille, in La Tribune Medicale* for May.

CLINICAL PSYCHIATRY.

THE HOSPITAL COMMISSION of the town of Berlin has decided to suppress the custom of indicating on the head-card of patients in the hospitals the name of the disease from which they are suffering. In surgical wards the disease will in future be indicated by the first syllable of its Latin name.—*The Hospital*.

FORENSIC PSYCHIATRY.

RANGE OF EVIDENCE IN AN INSANITY DEFENSE.—Perhaps few rulings of judges display such variability in notions of law as those which deal with the range of evidence in insanity defenses. The Washington (State) Supreme Court (112 Pacific Reports), says in *State vs. Flauney*. The defendant, a half-breed Amerind was tried for murder of his wife. The question as to the range of evidence was raised by the refusal of the lower court to allow the defendant to show that his wife had become what is known among the local Amerinds a "Shaker." That the man of whom the defendant was jealous, and

whom he charged with having weaned his wife away, was a Shaker; that the Shaker society is an Indian religious organization which teaches and practices promiscuous, illicit intercourse among its members, and that it is the duty of a member having a spouse who is not one of that faith to secure a divorce; that the defendant knew of his wife's faith, and, suspecting her of lewd conduct, was so greatly distressed in mind that for the time his reason was dethroned. The Supreme Court holds that this evidence was admissible.

The Supreme Court says that it has made an earnest research of the authorities, and finds that it is a first principle of the law that in all cases involving mental responsibility, whether it be in regard to contracts, wills, etc., or crimes, every fact which tends to show that the mental condition of the subject was abnormal at the time of the execution of the instrument or commission of the crime is competent. For the mind diseased cannot be measured by the mind of another. Neither the moving cause nor the limit of its aberration is to be calculated by any standard fixed by the law or medical science. Each case fixes its own relation to the law. What may unbalance one mind and lead it to act on its criminal impulses may have no bearing on another. Therefore it is important that all things which may bear on the subject of inquiry should be submitted to the jury, that it may say whether, from all the facts and circumstances leading up to the act complained of, the accused was, in fact, capable of distinguishing right from wrong when he committed the act.

The leading case on this subject is that of *People vs. Wood*, 126 N. Y. 249, which establishes the principle that "a party is entitled to the benefit of any competent evidence he may offer which bears on a controverted question of fact embraced in the issue."

A delusion of marital infidelity is acknowledged as a type or symptom of homicidal insanity by alienists. So that whether the accused had a belief grounded in fact or born of imagination, the evidence which was rejected was proper as tending to throw light on the defendant's mental attitude toward the victim of his deliberate physical act. Under all authority, it seems clear that having laid a foundation by

showing some evidence of mental aberration, the defendant could show that his wife's conduct had been such as to account for the state of his mind, and that his plea was not feigned. The testimony does not prove or disprove the crime, but it is a circumstance to be considered by the jury, as is a blow on the head, or a drug habit, etc. Nor does it introduce a collateral issue to be tried out. The inquiry should not go beyond such limit as will disclose the fact to the jury that there was a cause which might have moved the mind of the accused, and which it may consider as evidence tending to sustain his plea.

Such testimony should go to the jury under careful instructions. Its purpose and the limit of its application should be carefully guarded; so that the jury will not take it, if true, as in itself a justification or as an excuse for the crime, nor to prove justification for anger, hatred, revenge or an uncontrolled passion, or the momentary impulse of a sane mind, but for just what it is intended; that is, whether, considering all the facts and circumstances offered to show an insane act, it tends to strengthen the testimony by showing an adequate cause accounting in some degree for the alleged mental condition of the accused at the time the murder was committed.

It may be assumed that no man can measure the torment which a doubting husband tells o'er. If in the telling his reason so far fails that he cannot distinguish the right from wrong of his act, he is indeed an object of pity and compassion; but, on the other hand, if, with mental power to distinguish right from wrong, he takes the life of his victim he should be made to feel the heavy and unflinching hand of the law. It is for the jury to say whether the defendant is a felon, or the victim of an unfathomed nature. That it may make no mistake, the defendant is entitled to submit such evidence as he may, providing only that it is relevant and competent to sustain his plea.

RAPE ON INSANE PERSONS.—The Missouri Supreme Court (Division 2), finds in *State vs. Warren* (134 Southwestern Reports) that there was sufficient evidence to show that at the time of the alleged coitus with the defendant, the prosecutrix was so mentally deranged as to be incapable of understanding

the moral nature of the act, or of giving assent thereto. To sustain the conviction, however, the state must give evidence tending to show that the defendant knew of and took advantage of this mental infirmity, or he intended to have carnal knowledge of her by force, if necessary, regardless of her consent. As to the latter proposition, there was no evidence that such was his intent. All that the defendant did was with her apparent assent and approval. Whether there was any testimony from which knowledge of her incapacity to consent could be imputed to the defendant was a question not free from difficulty. Reason and authority suggest the following principles as guides in the solution of this question: (1) Carnal intercourse with a woman incapable from mental infirmity of giving consent is rape, unless the man is ignorant of her infirmity and its extent, believes he has her consent, and has no intention to have intercourse without her consent. (2) Where the woman in point of fact yields an apparent assent to the act, the burden is on the state to prove that at the time of the act she was incapable, because of mental disease, of assenting to or dissenting from the act, and that the defendant knew of such incapacity. It was therefore error to instruct the jury that mere insanity of a character to be recognized by a person of ordinary intelligence was enough to convict. There were two objections to this instruction: (1) Mere insanity, even if known, does not make the act rape. The insanity must totally destroy the capacity to consent. (2) The defendant must know that there is no capacity to consent. This knowledge may be inferred from facts and circumstances in evidence, but the jury must find as an ultimate fact that the defendant did know.

HEMOPATHOLOGY.

SULPHAEMOGLOBINAEMIA.—Some five years ago Van der Bergh, of Rotterdam, was investigating a case of persistent cyanosis in a boy suffering from rectal stricture. He at first believed that he was dealing with a case of methæmoglobinæmia, a condition first described by Stokvis; but eventually it was

proved that the abnormal blood pigment was sulphæmoglobin, a purple pigment which was produced many years ago *in vitro* by Claude Bernard by the action of sulphuretted hydrogen upon blood. The following year Van der Bergh reported three more cases; in this series of four, cure resulted in each case after systematic purgation, and the discoverer was thus led to conclude that the abnormality is due to absorption of sulphuretted hydrogen from the bowel. In England the first reported case was observed in 1906 by Drs. West, Garrod, and Clarke at St. Bartholomew's Hospital; a report was made to the Royal Medico-Chirurgical Society the following year. In this instance a searching investigation failed to show whence the blood derived its unusual constituent. The only suggestion that commended itself was that owing to some unrevealed pathological condition the blood may have been enabled to combine chemically with traces of sulphuretted hydrogen normally dissolved in the plasma. This, however, is a purely hypothetical view of the ætiology of the condition, unsupported by clinical findings. Within a short time of the publication of this case, two more similar cases were reported in London by Drs. Russell and Wynter respectively. Since then the condition has been identified in America, where Drs. Clarke and Curtis have analyzed it recently for the *Medical Record*, and have reported a case.—*Abridged Abstract—The Hospital*.

ANTIPATHY OF UNCONSCIOUS ORIGIN ARISING FROM A DREAM [*Antipathie de cause onirique et inconscient*]. (*Journ. de Psychol.*, May-June, 1910.) *Kreist, M.*

Apropos the above H. Devine in the *Journal of Mental Science* for October, 1910, records the following:

In this paper, the author recounts the case of a man who entertained an increasing animosity towards his wife. He became so cantankerous that she began to consider the question of divorce. The interesting feature of this antipathy consisted in the fact that the patient himself could not understand it, and stated that it co-existed with a feeling of great affection for his wife. It seemed that his irritation was always more marked on waking in the morning, and towards the evening he often became quite amiable.

Under hypnosis patient related a dream in which his wife told the children that their father was a very uncouth man, and in the dream the couple engaged in a strenuous dispute. Upon waking he forgot the dream, but found everything the pretext for quarrels with his wife. When the hidden cause was revealed to the patient in the waking state his irrational antipathy disappeared.

Such a case throws considerable light upon sentiments and feelings which often appear inexplicable, and indicates that conscious activity may be controlled by unconscious processes of which the personality is unaware.

EXAMINATION OF THE BLOOD IN DEMENTIA PRÆCOX [*Blutuntersuchungen bei Dementia Praecox*]. (*Allge. Zeitschr. f. Psych.*, vol. lxxvii, No. 3.) Heilemann.

The following from the epitome of the *Journal of Mental Science* by Hamilton C. Marr.

This examination was spread over two years, and was conducted in 150 cases of dementia præcox. Dr. Heilemann deals with morphological changes and serum examination of the blood.

The existing literature on the subject does not give an account of any definite result; the findings are as yet, according to Kraepelin, uncertain and many-sided.

The blood used by Dr. Heilemann was extracted from the ear lobe, fixed in methyl-alcohol, and colored with hæmatoxylin-eosin or with Giemsa solution.

The absolute count of white blood-corpuscles was in many cases somewhat, but not remarkably heightened, a circumstance which, taken by itself, is of little importance. More interesting is the analysis of the white corpuscles and the numerical comparison of their different forms. They are thus described:

(1) Lymphocytes: small (about the size of erythrocytes) round cells composed of large nuclei and only a thin covering of plasma. In some of these the plasma mass is enlarged.

(2) Large mononuclear cells. They are three times as large as the above-named, and have plump, rounded, or horse-shoe-shaped nuclei which color faintly.

(3) Polynuclears or neutrophiles with lobulated or broken-up nuclei and rich protoplasm (leucocytes in a narrower sense); and

(4) Eosinophiles, which are similar to neutrophiles, but in which the protoplasm is filled with coarse granules which greedily absorb the acid coloring matter.

In comparing the percentages of these different forms with the normal percentages, there was found to be in dementia præcox a notable decrease of polynuclears. In no case did they attain the normal quantities (lymphocytes, 20-25 *per cent.*; polynuclears, 70 *per cent.* or over; other cell-forms, 2-4 *per cent.*), but were in every instance much below normal, in some cases only being found in half quantities. This decrease was accompanied by an increase in all the other cell forms, the mononuclears and eosinophiles increasing with the lymphocytes, and sometimes attaining double their normal quantity. In cases of other mental diseases tested the findings were mixed. Age and sex had no influence in the change of blood condition found. It is not certain, however, whether this change was varied according to different forms of dementia præcox. It is indicated that a high number of eosinophiles generally accompanied catatonic symptoms.

From these discoveries definite blood changes in dementia præcox are an established fact. That these changes indicate a chemical evolution in the system is a near-reaching conclusion. On account of their difference in character it would be useless to compare somatic diseases, which in one direction or another influence the blood-picture in a similar manner to that seen in dementia præcox. On the other hand, the hypothesis of a toxin being present in the blood would explain these changes. Naturally, nothing can be said in regard to the value of the symptom and the *role* it plays in the complete phenomena of the disease. But there is an interesting physiological analogy to the blood-pictures described, to be found in the blood of a young child. In this the lymphocytes are greatly increased, and further, Benjamin has found that the blood of a healthy suckling baby contains up to 14 *per cent.* mononuclears and 7 *per cent.* eosinophiles. As to whether there is any under-

lying connection in the two cases is a question open for discussion.

Nothing more enlightening has yet come to us from the domain of hemopathology and this is the source from neurology, neuriatry and hemo-neurotherapy and psycho-hemotherapy want more light.

CHEMICAL, CYTOLOGICAL, HAEMATOLOGICAL, AND HISTOLOGICAL STUDIES OF THE CEREBRO-SPINAL FLUID IN MENTAL DISEASES [*Chemische, zytologische, haematologische und histologische Studien ueber den Liquor cerebrospinalis bei Geisteskrankheiten*]. (*Jahrb. fur Psychiat.*, vol. xxx, Nos. 2 and 3.) Wada and Matsumoto.

The results of these studies are summed up thus:

(1) Paralysis (certain), nine cases. In thirteen out of fourteen punctures "phase 1" reaction of Nonne was distinctly positive, and the whole albumen mass and cell-count much increased. In one case the albumen and cell reactions were at first negative, but on further examination gave positive results.

(2) In remission of paralysis the result was also positive.

(3) Fifteen cases of other mental diseases were examined. Out of sixteen punctures only one (a case of epilepsy) showed a slight positive albumen and cell reaction. On further examination of this case, "phase 1" reaction and the cell reaction were negative, while the total albumen mass was slightly increased. It is thus obvious that in some cases repeated puncture is necessary in order to finally decide the diagnosis.

(4) In the above quoted sixteen punctures "phase 1" reaction was fifteen times negative, the total albumen mass, nine times, and the cell test thirteen times normal. "Phase 1" reaction has, therefore, the greatest differential diagnostic value for distinguishing paralysis from other psychoses. If the reaction is negative paralysis can be denied, even if the total albumen mass or cell-count is increased.

(5) In paralysis the relationship between the cell-count and albumen mass was not proportional.

(6) Among the cells of the cerebro-spinal fluid of paralysis there was 87 *per cent.* of small lymphocytes and also a very

small number of large lymphocytes, polynuclear leucocytes, transitional forms, fewer epithelioid cells, and ependymal cells.

(7) In one case and in an acute exacerbation of paralysis there was polynuclear leucocytosis of the blood and relative increase of the same leucocytes in the fluid. This may be a sign that the paralytic poison is suddenly richly produced and develops its general working.

(8) Dementia præcox, six cases. In four cases the albumen and cell reactions were negative. A case which had had an apoplectic attack showed only a slight increase of cells, and in a case of chronic alcoholism the total albumen mass was somewhat increased.

(9) In the case of apoplexy in dementia præcox there was a slight increase of cells, no lymphocytes, and a remarkable increase of the polynuclear leucocytes of the cerebro-spinal fluid. At the same time there was no lymphocytosis and no change in the percentage of the single leucocyte varieties of the blood.

(10) Chronic alcoholism, two cases (one dementia præcox and one manic-depressive insanity). Both showed a slight increase of albumen, normal cell-count, and negative "phase 1" reaction.

(11) Post-apoplectic dementia, one case. Albumen and cell reaction negative.

(12) Epilepsy, five cases, six punctures. In one case, there were slightly positive results on the first testing of albumen and cells, as in paralysis, but on testing again "phase 1" reaction and cell-counts were negative, while the albumen was slightly increased. Further, there was a slight increase in the total albumen mass in two cases, a slight increase of cell-count in one case, and quite negative albumen and cell reactions in another. "Phase 1" reaction was in five punctures negative.

(13) Idiocy, two cases. Negative albumen and cell reactions.

(14) If there was a leucocytosis of the blood the cell-count of the fluid did not increase, excepting in the cases of paralysis.

(15) A proportional weakening of the percentage of similar kinds of leucocytes in the blood and in the fluid did not

take place, except in one case and in an acute exacerbation of paralysis.

(16) The cell contents of the spinal fluid and of the meninges of the lowest sections of the spinal cord were not proportional.

(17) In the histologically examined cases it could not be testified that there were cases in which (as found by Merzbacher,) without irritation of the meninges, there was an increase in the cell-count of the fluid.

(18) In three out of four cases in which there was a certain or probable history of lues the albumen and cell reactions were quite negative, so that it was quite easy to tell the difference between this and paralysis. Only in one case was the cell-count alone somewhat abnormal. The patient sometimes suffered from an apoplectic attack, and on histological examination there was found a cell infiltration into the pia mater.

—Hamilton C. Marr, in *Jour. Mental Science*.

NEUROPATHOLOGY.

STEWART ROBERTS ON *SIMULIUM FLIES* AND SAMBON'S THEORY OF PELLAGRA.—The same topographic conditions exist in Georgia and some of the other Southern states that Sambon found in Italy. It has also been shown by the united testimony of several students that practically all the cases of pellagra are rural in origin and exist along streams. I asked Dr. Bradley, assistant state entomologist of Georgia, to determine for me, if possible, whether any species of the *simuliidae* existed in Georgia. He consulted Dr. J. M. Reade, professor of botany in the University of Georgia at Athens, and they found in a creek two miles from Athens the larvae of the fly in such numbers that they completely covered some of the rocks. Attached at the anal end, they waved their two modified mandibles in the fast flowing water in search of desmids, diatoms, and other aquatic growths. They were found February 8, and they emerged as the spring brood of the mature fly March 27, 1911. This species was identified as *Simulium pictipes*, a remarkably large species,

found also and reported from the Adirondack Mountains, Texas, Michigan and California. This species was identified for Mr. Bradley by Dr. O. A. Johannsen of the Maine Experiment Station. The third condition exists in Georgia as in Italy, viz., the presence of an abundance of *Simulium* flies. Lastly, we have a large rural population, as has Italy.

To summarize:

1. Georgia and Italy both have pellagra.
2. The two have the same topographical conditions.
3. Pellagra originates in both territories along streams.
4. Both countries have many *Simulium* flies.
5. Both countries have a large rural population, from which most cases of pellagra originate.

This theory of Sambon has received the support of Sir Patrick Manson in the fourth edition of his book on tropical medicine; and Castellani and Chalmers support it in their recent book on the same subject. Professor Terni, at the Pellagra Congress held at Milan, and Drs. Moore, Wood and Taylor, spoke in favor of Sambon's insect theory at the Columbia, S. C. Congress on Pellagra, though Sambon had not in 1908 connected the *Simulium* with the disease. The supreme criticism of the theory lies in the fact that the parasite has not yet been discovered, and this discovery is necessary to complete the theory.—*Journal A. M. A.*, June 10, 1911.

ALOPECIA NERVOSA.—Before the Aertzlicher Verein, Munich, *Münchener medizinische Wochenschrift*, Trautmann lately reported a case of occipital alopecia following extraction of the supraorbital nerve. The connection between surgical intervention in the trigeminus field and occipital alopecia, numerous cases of which are on record (such as follow tooth drawing, operations on the frontal and ethmoidal sinuses, etc.), is obscure unless it can be set down to the credit of a special reflex. But at least it represents something definite. In the author's case the hair fell out *en masse* on the day following the operation, leaving the occiput nearly bare. Six weeks later there was evidence that the hair was growing in.

POLIOMYELITIS FINDINGS AND CONCLUSIONS.

1. The cerebrospinal fluid in acute anterior poliomyelitis is generally clear; there is in the early stages of the disease an increase of pressure although this is not generally pronounced and there is usually an increase of the protein content sufficient to give a positive Nonne-Alpelt and Noguchi butyric acid reaction.

2. In the earlier stages of the disease there is more or less pleocytosis in the spinal fluid. There are many polymorphonuclear leucocytes which are probably dependent upon the reaction of the meninges to the penetration of the virus into the central nervous system.

3. The increase of polymorphonuclears disappears a few days after the acute onset of the disease and is substituted by a lymphocytosis with some plasma cells and sometimes a few mast cells.

4. The disappearance of the polymorphonuclears is brought about through the rapid and vigorous phagocytic activity of the macrophages which sometimes contain twenty or more rests of the polynuclear elements.

5. These degenerated polymorphonuclear leucocytes show in the framework of the macrophages very different degrees of histo-chemical changes which are indications of rapid processes of digestion.

6. The presence of the altered red blood cells in the spinal fluid is probably dependent upon capillary hemorrhages in the spinal cord which is a consequence of the selective preference of the disease for the spinal vessels.

7. Körnchenzellen, altered lymphocytes and other mononuclear elements are commonly present in the fluid until after the fever period.

8. In our histological study of the spinal fluid in the disease, we did not observe any stained bacteria.

9. The similarity of the histopathology of the spinal fluid in poliomyelitis to that of the fluid in some protozoan diseases affecting the nervous system is argument in favor of the protozoan nature of the virus in poliomyelitis, even though some other investigators claim the disease to be produced by a much smaller organism.—Report of Poliomyelitis Com. Med. Ass. Dist. Columb. *Epedem.* 1910.

NEUROTHERAPY.

CALCIUM CHLORIDE FOR WATER PURIFICATION.—The nervous system needs pure water. The health authorities of Toronto, Ontario, Canada, recommend to campers, prospectors, travelers and users of Toronto Bay water this combination:

Chloride of lime one level teaspoonful rubbed in four fluid ounces of water and the mixture diluted with twelve ounces of water. Add of the above solution one teaspoonful to two gallons of water to be purified, mixing thoroughly. This mixture gives between four and five parts of free chlorine to a million parts of water, enough to destroy in ten minutes all the typhoid and dysentery producing germs, leaving the water without taste or odor.

VASECTOMY has been performed upon several hundred individuals in the State of Indiana. Observations there indicate that the operation is not followed by any bad effects physically upon the growth or development of the individuals subjected to it, and the care of such wards of the State is immensely simplified by it. It very greatly diminishes the practice of masturbation and renders procreation impossible in those subjected to it.—*Medical Sentinel*.

CHLORAL HYDRATE AS A LOCAL APPLICATION.—*The New Albany Medical Herald* abstracts from Heller, of Kiel, (Münchener medizinisch Wochenschrift) the statement that chloral hydrate as a local application possesses antiseptic and anesthetic properties and so relieves pain. He recommends a spray of chloral in watery solution about twenty seconds to a minute three times a day. Strength two per cent. An additional advantage of this application is that it is not only antiseptic but deodorant.

PRECAUTIONS IN THE USE OF SULPHONAL. ITS ACCUMULATION IN BLOOD AND RENAL IRRITATION.

Sulphonol is excreted very slowly by the kidneys: it tends therefore to accumulate in the blood; and it also acts

as a renal irritant. If more than a certain amount be absorbed daily, it accumulates within the system even in the case of perfectly healthy persons, and if only a few doses be taken it is found that unchanged sulphonal is secreted in the urine for three days after its administration has been stopped.

There is no doubt the explanation of the prolonged action of sulphonal and of the well-known fact that if it be given for insomnia one night its beneficent effects are observed on the duration of the second night's sleep as well.

Nephritis has been produced experimentally in animals by sulphonal, and in many of the fatal cases of poisoning similar changes have been found in the kidneys. During life in these cases there is a diminution in the quantity of urine excreted, with the presence of albumen and tube casts. (Dr. George Robertson, Superintendent Morningside. Ed. in April *Journal Mental Science*.)

NEURO-HEMOTHERAPY.

COLCHICUM AND THE METABOLISMS.—Storck found colchicum to be a diuretic; Hammard considered it increased the solid excretions; Chelius claimed it augmented the uric acid eliminated; Malcagan, that it increased the urea and uric acid output; Bouchardet has established that it increased the urea, uric acid and inorganic salts; Taylor observed that urea and uric acid disappeared from the blood after ten days treatment with colchicine; Mairet and Combemale more recently confirmed the diuretic action of the drug. On the other hand, Rabuteau opposed these views; Garrod stated that it diminished the urinary excretion, while Schorff said uric acid elimination was not increased. Osterlen and Boeker did not find it influenced the urea or uric acid output, but Lecorche inclined to the opinion that it diminished the urea.

This summary of recent investigations shows the necessity of further study of the question, hence this abstract of the communication of Maurel and Arnaud on the influence of

colchicine on the metabolism of the rabbit (*Societe de Biologie*, 22 Jan., 1910).

The experiments were made with a rabbit fed on bran and cabbage. The animal was weighed each morning before being fed. The urine was collected each day, and analyzed with a view to determine the output of urea, phosphoric acid and chlorides. Colchicine was given in a first series of experiments in doses of .001 to .0015 grammes per kilogram of the animal's weight, hypodermically. Under the influence of the drug, the quantity of food absorbed by the animal was not modified. The calories value increased from 200 to 201, and the urinary nitrogen under the influence of colchicine, was increased from 0.295 to 0.410. The quantity of urine secreted rose from 32.9 to 49 grammes. The amount of phosphoric acid rose from 1.417 to 2.021 grammes and the chlorides from .1132 to .664 grammes.

This exaggeration in the organic and inorganic excreta under the influence of colchicine explains its therapeutic action on man in such plethoric affections as gout, and we think justifies its employment.

A second series of experiments was also made on rabbits with .002 gramme of colchicine per kilogram of animal with similar results. Medical Progress abstract from the *Revue de Pharmacologie Medicale*, March, 1910.

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EDITORIAL.

LECITHIN AND OLIVE OIL PROMOTERS OF PHAGOCYTOSIS.—The February 18th Journal of the American Medical Association, discussing the important fact of lowered phagocytosis under and after ether anaesthesia and means of counter action, thus introduces Evarts Graham's suggestive and apropos researches.

Lecithin, when added to etherized serum, was found to restore the opsonic power to normal, and—what is of especial practical importance—the subcutaneous injection of lecithin into animals, immediately after anesthetizing them, was found to cause the opsonic index to rise much more rapidly than it did in control animals. This effect of lecithin apparently

depending chiefly if not entirely on its ability to take up ether from aqueous solution, the action of olive oil was tried and found to be similar. The application of this principle to clinical uses was then made by giving rectal injections of olive oil to patients immediately after anesthesia, with strikingly rapid return to normal of the opsonic power of the patient's blood as the result.

These facts have therapeutic significance in other prophylactic and remedial directions than in the warding off of pneumococcus and other post operative perils in consequence of ether impairment of the leukocyte protective power of the blood.

Aside from the satisfactory clinical results which some of us have had from lecithin in our pharmaceutical prescriptions and olive oil in our directed dietary, the confirmatory fact of raising the opsonic index and increasing the bactericidal power of the blood encourages continuance in their employment.

To promote phagocytosis is to summon to our therapeutic aid the *vis medicatrix naturae* when microbic invasion threatens organic destruction.

The more rapid rising of the opsonic index in etherized than in control animals was not probably due, as suggested, to the ability of ether or olive oil to take up ether from aqueous solution, but to direct stimulating influence on the white blood cells.

THE WRONGFULLY CALLED INSANITY DODGE received a just rebuke from Dr. Carlos F. MacDonald of New York, in a paper at the last Conference on Reform of Criminal Law Procedure, at Earl Hall, Columbia University.

"He declared that the percentage of criminals who escaped their just deserts by pleading insanity was extremely small; that many people were incarcerated in prison who ought actually to be in lunatic asylums, and that the law in regard to criminal insanity was woefully antiquated and inadequate. Doctor MacDonald said, in part:

"One of the popular delusions of the day, if I may so term it, is that the plea of insanity—the so-called 'insanity dodge'—is frequently successfully used in the defense of sane criminals.

While it is true that a trumped-up defense of insanity is frequently offered in criminal cases in which there appears to be no other avenue of escape, the fact is that a dishonest plea of insanity very rarely succeeds. During an experience of nearly forty years in the observation of such cases I have personally known but two instances in which a sane criminal escaped conviction on the plea of insanity.

"The real injustice in this matter is that the insanity defense is not by any means employed as often as it should be. In other words, much more harm results from lack of expert testimony than from its defects. There are far more instances of the commitment of insane persons to prison for want of preliminary examination and recognition of their mental condition than there are of the commitment of sane criminals to hospital for the insane. Many so-called criminals are convicted and sent to prison only to be found insane and transferred to the asylum for criminal insane. Such patients are wholly out of place in prisons, where they are stigmatized as felons and deprived of the proper and humane care that is due, but are made worse by prison discipline, while the difficulty of enforcing prison rules in their cases greatly interferes with proper administration.

"Doctor Allison has reported that 53 per cent of 179 insane persons under his charge at the asylum for the criminal insane at Matteawan, who had committed murder, were received from prisons to which they had been sentenced for life. Their histories and the character of the disease showed that at least 40 per cent of such convicted cases were insane at the time the crime was committed. In many instances the fact of their insanity was not recognized at the time of their trial, but in others the plea was set up and failed.

"Whenever this matter has been made the subject of inquiry, this has been the story in all large prisons and institutions in which the criminal insane are received both in this and in foreign countries. The lowest estimate from authoritative sources, and a most conservative one, is that ten insane persons are made convicts to one malefactor who escapes punishment on the plea of insanity.

"It is also a prevalent notion that it is an easy matter to simulate or feign insanity successfully. The fact is that one could scarcely undertake a more difficult role. To succeed in shamming insanity so as to deceive a skilled observer, one would require not only to be a consummate actor, but to be well versed in the symptoms of the different forms of mental disease, and to possess unusual powers of endurance. The average criminal, being entirely ignorant of the symptoms of insanity, usually overacts his part and fails to present a consistent clinical picture of any form of that disease. The 'symptoms' he presents to the eye of the experienced alienist are usually a medley of symptoms in which he mixes up the various forms of insanity indiscriminately. Furthermore, his 'symptoms' as a rule subside when he believes he is not under observation. As a consequence I have no hesitancy in saying that it is practically impossible to simulate insanity so as to deceive a skilled physician."

We thank the *New York Evening Star* for making this matter public in the interest of the rights of the insane. They have been greatly wronged by the sneer of the "insanity dodge." Far fewer sane men escape on the plea of insanity than insane receive unjust conviction in our courts.

A real clinically experienced expert can usually soon detect the most adroit simulation of insanity. But the many pseudo self-assumed experts, without adequate clinical experience on which to base correct judgments, who with more assurance than knowledge, offer themselves as psychiatric experts, often fail to detect insanity in crime where it truly exists. These self-assumed experts usually decide the question by self introversion. They would not do so and so under the circumstances hence the other man who does is insane.

They think they know mania and idiocy and fits when they see them and diagnosticate the other phases of mental aberration by guessing and self comparison and discourse with confidence on what ought to be insanity or sanity but may not.

The pseudo alienist expert who formulates insanity or sanity by psychic comparison from his inner consciousness rather than from the true clinical picture of experience is re-

sponsible for many insane in penal institutions and for some sane rascals out who ought to be in them, and dishonesty and partisanship are not so prevalent among the wrong sort of insanity experts as ignorance, and perhaps cupidity combined therewith.

A certain kind of doctor thinks he ought to know as much as the clinically trained alienist on this often intricate subject and courts accept his own false estimate of himself in the gravest of cases.

O! RIGHTEOUS JUDGE.—Judge Pugh's decision (District of Columbia) in restraint of automobile "horns of strange and ear-piercing quality" will be commended by all sanitarians and well wishers of humanity.

The rapid increase of the automobile and auto motor in popular demand has brought into public ken the speed cranks and noise paranoiacs. It is high time that the courts should take note of these disturbers of the people's peace and health and fine such as are sane enough to appreciate such lenient punishment, assigning the others for hospital detention and observation as to their sanity.

The auto craze brings lunatics to light, as wars, alarms or other public excitements bring other lunatics into view.

It certainly is not essential that our streets should be given over to unearthly shrieks that remind of women in the throes of travail or of children being crushed to death or the bellowings of bulls or the barkings and noise of disturbed wild animal menageries or the agonies of extreme fright or torture. One need not be awakened of nights dreaming of Gabriel's last resurrection blast simply because an insanoid speed-crazed chauffeur is passing. Let the courts and the police curb these incipient lunatics who are letting go of their brain inhibitions which keep them within that narrow boundary (conventionally and charitably to them) called the limit of sanity. The world has 'already enough ready to be made lunatics without its permitting the new automobile craze to make more and the courts are the right remedy and relief for the people who are yet sane and desirous of peace and sanity against these brain unstables and their soul annoying ways.

TRADE TEACHING FOR THE INSANE.—Dr. Frank Wade Robertson in the *Philadelphia Cyclop. and Med. Bull.* for May touches lightly upon the subject which medical superintendents of hospitals for mental diseases have always considered a valuable therapeutic measure but have found the chief difficulty in selecting patients who can be safely intrusted with tools.

Edge tools and sharp pointed knives, hammers and hatchets are dangerous implements about insane hospitals, where eternal vigilance is in very truth the price of the liberties they are permitted. For instance: the sewing room has only blunt pointed merchants scissors, the dining rooms have no sharp pointed carving knives and the insane are never allowed to shave themselves in any well supervised asylum for the insane, though the safety razor with irremovable blade might now be entrusted to his hand. No one but the clinically experienced alienist knows the solicitude of an asylum physician against the casualties liable to be caused at any time through unrestrained morbid impulses of the insane under his care. The marvel of the age is the latitude given lunatics through scientific substitution of vigilance, wise hospital construction and safeguards for the old dark cell and the strait-jacket now mostly of the past.

THERAPEUTIC ANORTHROPIA.—In surgery and in internal medicine relative to therapeutics, as in ophthalmology, it is wise to remedy anorthropia. Psychic anorthropia as to the value of remedies is a good thing to be avoided in the profession generally and on many subjects. At present the medical profession is being struck with a tidal wave of arrant ignorance on the subject of right scientific medical treatment, as if our present-day hemodiagnosis, alexin hemotherapy and neurotherapy were naught.

TALKING PSYCHIATRY LIKE ALIENISTS.—Physicians are often amused and sometimes grieved at the *faux pas* of newspaper reporters in matters medical but not so often shocked by the *corps editorial* of our dailies and magazines as lately startled us in the statement that brain strain was not as great

in causing retrograde metamorphosis as muscle over-exertion and loss of sleep.

But the following extracts, one from a home and one from a foreign source, show gratifying appreciation of psychologic, psychopathic and psycho-therapeutic truth and progress, promising much for human welfare under states of brain enthrallment and psychopathic misfortune.

The St. Louis Star of June 1st ultimo, editorially says:

"Buffalo is going to experiment in sensible and scientific treatment of delinquent drunkards. It will proceed on the medical theory that dipsomania is a disease, as it undoubtedly is.

"The young man who goes out for "a high old time," becomes intoxicated and disturbs the peace, or worse, is not afflicted with a disease. He is in a pathological condition from taking too much alcohol, but he is not in a chronic diseased condition. He deliberately places himself in such a condition, without the impelling power of disease, and is morally responsible for all the consequences of his act.

"But this is not the case with the dipsomaniac, the man whose nerves and other portions of his body have become abnormal because of too long continuance of alcohol drinking, begun, probably, in the same spirit of "high old time" spoken of. This condition may come soon, or it may be delayed, depending upon the diligence of the patient in seeking to bring it about, and the resisting power of his system, but come it will if he persists.

"It is the purpose of the new system to be tried in Buffalo, to seek to cure such a man, by sending him to an institution—a Work House organized as a sanitarium—where he can be treated medically, be deprived of the exciting alcohol and be given healthful labor, until such time as the physician in charge considers him in normal condition and fit to be discharged.

"It follows that there can be no definite number of days fixed in a sentence to such an institution, but that all terms must be indeterminate. It also follows that the work done should be remunerated at fair wages, so that when the cured dipsomaniac is released, he shall be able to live properly and get work, and not be forced immediately into the gutter again

or that his family may not suffer from the loss of his support. It is true that, in most cases of chronic dipsomania, the man is a burden upon his family instead of a support, but if he can be made to contribute to its support while being treated, the fact that he did not do so while living the life of a drunken sot should make no difference. He should support them, whether he formerly did or not.

"So far as we know, this is the first effort in this country to apply common sense and science to a matter which is essentially a medical and judicial one jointly. We may live to see the day when the Work House as we know it shall be a thing of the past, and a real Work House take its place, with the sanitarium feature for drunkards and drug victims. Penalogsists, sociologists and medical men have been discussing these two features of our penal system, the actual wage-earning Work House and the sanitarium feature for drunkards, for many years, but it is only recently that they have sufficiently reached the ear and the understanding of the general public to have much effect upon the erudites of our ancient system. It is to be hoped that the Buffalo experiment will be successful, and will lead to a general adoption of advanced ideas in the treatment of all offenders, particularly drunkards."

DIPLOMA IN PSYCHIATRY.—From Occasional Notes in the (April, 1911) *Journal of Mental Science*, Editorial Department, we present the following as of timely importance from a high source:

"Dr. Clouston's paper on the success that has crowned the efforts of the Association with the University of Edinburgh leads to the hope that similar successes may be recorded at an early date in connection with other universities.

"The advantage that such a development will confer on the specialty is beyond all question, and is to be hailed with all the enthusiasm so admirably expressed by Dr. Clouston. There is, however, a converse side in a feeling of anxiety that these special examinations might become too special. Already, in the earlier phases of medical examination, a student is examined, in physiology, for example, as if he were about

to specialize in physiology rather than in medicine, and so on of other subjects.

"The result is, that instead of a medical qualification being obtained in five years the average period is six and a half; and if the student has obtained a degree in arts prior to this, the result is that even before his specialization he has reached an age which is late for taking up the actual business of life.

"Examiners, acting according to their wont, might easily render it impossible for a student to acquire the requisite knowledge for a pass in the complex subjects of a medico-psychological degree in double the nine months estimated as necessary by Dr. Clouston.

"The establishment of a degree in psychiatry is the fulfillment of one of the ends at which the Medico Psychological Association has long aimed, but this has only been rendered possible by the action of those of our members alluded to by Dr. Clouston, to whom the sincerest thanks of the Association are most justly due.

NOW THE VOICE OF THE PSYCHIATER is heard in the land proclaiming the way of salvation from race degeneracy and suicide and the legislator, jurist and the surgeon re-echo it.

The cry of relief from sexual perversion, the venereally contaminated and the tuberculotic is likewise being sounded. Great is sanitation and Hygeia is her shibboleth and prophet.

WILLIAM SIDIS, THE YOUNGEST HARVARD STUDENT.—Dr. Boris Sidis's son, William Sidis, has attracted considerable attention owing to the early age—11 years—at which he entered Harvard. The success soon attained in higher studies by this youthful savant, owing to the carefully planned and intelligent training given him in his earlier years by his father, made it seem probable that his brain might soon give way under the stress of excessive mental labor. Indeed, it was reported that the boy has broken down from overstudy. The following letter, received from his father, shows that this is by no means the case, while substantiating the opinion of Dr. Sidis that present methods of primary education fail

utterly, in our country, to utilize to the best advantage the mental capabilities even of the average child—

“My son was 13 years old on the first of April. He is tall—5 feet, 4 inches—and weighs 112 pounds. Since last year he gained nearly 20 pounds in weight. He looks like a boy of 16. At present he is at Harvard taking advanced courses in the highest branches of mathematics and astronomy, also in the highest branches of modern critical analysis of Greek literature. He knows Homer by heart and reads the works of Aeschylus, Sophocles, Euripides, Herodotus, Lucian, with the same ease with which a high-school boy reads Dickens and Walter Scott. He also has a fair understanding of our politics and the groundwork of our Constitution. I may say that he works no more than five or six hours a day.”

Much ado is made about the lack of preliminary education shown by the average medical student (in keeping with all other American students), and it is believed that the addition of two years' college work to his present equipment will improve the situation. But it will not. The fault does not lie with the student, but with the American system of education which endows a boy of 18 with knowledge that a boy of 14 in Europe would be ashamed of. If Dr. Sidis's address in our December issue is read with care, the reason for this unfortunate state of affairs will become apparent.—*Sajous and Taylor, Editorial Month. Cyclop. and Med. Bull.*

THE UNSTABLE NEURONE LET LOOSE AT A MEDICAL BANQUET.—Psychic inhibition as to the proprieties under certain excitation is not overstrong in the majority of mankind. It is the gloss and veneer of our civilization. In relation to normal self-restraint, mankind is much like a row of bricks standing in a line and near touching each other. Topple over one so that it touches its fellow in falling and they all go down in turn.

The recent “horse play” treatment of the President of the Canadian Medical Association, tossing him up in a blanket till they put him on the sick list is an example in point. Here is in part the *Canadian Practitioner's* and the *Toronto Star's* ac-

count of this unstably neuroned outbreak of violence against the proprieties and the distinguished doctor of medicine.

"To the deafening chorus of 'Rah, rah, rah,' and the shouts of 'And again,' a dozen lusty doctors bounced the noted surgeon, Dr. G. E. Armstrong, at the Medical Graduates' Reunion Dinner, held in the Windsor Hotel last week, and next day Dr. Armstrong was laid out on a cot, a patient in the hospital of which he is chief,' says the *Practitioner*. 'It would be interesting from a psychological standpoint if some one could explain such an idiotic act. This was not a student body, but an assemblage of the cream of the medical graduates of one of the great universities of the world, with a representative of His Majesty the King as one of the guests. When a crowd of men become seized with hysteria and some lunatic commences horse play almost inconceivable things are likely to happen.' "

There was at least one man and perhaps a little coterie among these graduates who are likely someday to land, under strain of great psychic provocation, in a lunatic asylum.

The explanation is in the psychopathic instability, all too common in our modern brains, which processes of pedagogic education should seek to repress rather than draw out in these days of strenuous educational endeavor.

The hazing business and the college yell tend too much toward savagery for the best entoning of the brain for its greatest and most substantial and steady possibilities.

CRIMINALLY KILLING CITY RAILWAY NOISES.—If a cabman should drive up to a citizen's door with a jangling soul-racking, nerve-shattering vehicle ninety per cent less noisy than our speech paralyzing, steel tracked and jangling chain-trucked and otherwise equipped street cars that pass our doors, he would be arrested for disturbing the peace of the people. But the health destroying racket and peace dispelling, rumbling and killing of the United Railway has been submitted to in St. Louis until every citizen who could stand the expense has moved either to the suburbs or further away and only the helpless ones east of Grand Avenue remain to be sickened or killed by the noise.

St. Louis is growing, but she is growing out of town and residence rent signs are everywhere where the United Railway runs riot with the happiness and health of the people.

Why is not our rapid transit made reasonably noiseless and healthful?

If a neighboring musician insists on performing all day and at all hours of the night and early morning, especially if his favorite instrument is a clarinet or drum or horn he is hailed into court and fined, but our street cars go on with their racket forever, no court, nor health board takes cognizance of the affliction.

The ladies, bless their well-meant but unsuccessful efforts, attack the smoke nuisance but this railroad noise evil that sickens the well and kills the sick gets no remonstrance from them, yet the U. Rys. kill more by rest robbing and sleep theft than all other causes of mortality combined in our big franchise throttled cities.

Why is not our rapid transit made reasonably noiseless and healthful?

CONGRESSIONAL INDIFFERENCE TO THE PUBLIC HEALTH.—*The Lancet-Clinic* refers approvingly to the *New York Evening Journal's* demand for a Committee on Public Health in the American House of Representatives.

The Alienist and Neurologist joins in asking why to the seventy committees in the House and fifty-five in the Senate one more might not be added for considering and providing for the peoples' sanitary welfare.

There is no money in this proposition nor do we think there is any put up against it as there was in the Ohio Legislature against the rest needs of women bread winners.

Considering, however, the slowness with which the average Congressman's mind moves in the direction of measures not surely promotive of his political or financial good fortune, considerable progress has been made in the direction of caring for the public health since Dr. Southwood Smith only between seven and eight decades ago published his philosophy of health and Perry and Barnard essayed for sanitary school houses for we have now the Public Health and Marine Hospital service

and some day not far off we hope we shall have a department of public health with Wyman in the President's Cabinet. But let not Congress wait till Wyman is superannuated.

CHADDOCK'S EXTERNAL MALLEOLAR SIGN.—Doctor Charles Gilbert Chaddock of St. Louis says such a sign he thinks he has found in extension of one or more, or all, of the toes, with or without fanning of them, when the external infra-malleolar skin area is irritated, in cases of organic disease of the spinocortical reflex paths.

Citing many cases he says:

"These and many other cases have proved to my satisfaction that irritation of the external infra-malleolar area causes no reaction normally; that the external malleolar sign is usually present when Babinski is present; that it is often present when Babinski is absent; that it may come before, accompany a Babinski, and outlast it; that its presence or absence is a great clinical aid in the interpretation of doubtful or occasional abnormal movements excited from the sole; that it signifies disorder of an organic nature in the spino-cortical reflex paths. In cases of unilateral capsular lesions, the external malleolar sign occurs often on both sides—on the paralyzed side with Babinski, on the unparalyzed side without Babinski (homologous motor fibres.) It has been found pure and unilaterally in two cases of cerebrospinal meningitis (epidemic), and in a case of tuberculous cerebrospinal meningitis. It has been found in one case (no nervous lesion apparent) from the ankle where the foot had been dislocated forward creating an arthritis—which suggests some possible relation between this sign and arthritic ankle clonus."

A CASE OF HYSTERO-CATALEPSIA IN ILLINOIS has been occupying the attention of the newspaper reporters for several months past in noting her freaks of endurance, eating at recurring periods of wakefulness for refreshment, her mind, etc., making records of a late bill of fare including a fried chicken dinner.

Sensations of this kind can be found almost any day in the lunatic asylums, notwithstanding the usual statements

of how they puzzle the attending physicians, etc. when seen in the country. Some of these cases are more regular and systematic than others. One of our cases at the Fulton Hospital used to emerge from his cataleptic unconsciousness once every day for many months, about the same time for food and drink, the calls of nature, etc. and then lapse into the characteristic somnolency with rigidity till about the same hour the next day.

Hystero-epileptics, hystero-cataleptics and cataleptoid hysterics are common daily occurrences. At this writing, a brain-fagged medical student recovered by rest from cataleptoid psychasthenia, goes from the hospital to complete his convalescence and comes back to try again next year the strain of study, anxiety and examination. The literature of psychopathy is full of such.

SHADES OF CHIARUGI AND PINEL and all psychiaters and philanthropists, note this: "Many insane vaccinated. Health Department Physicians, accompanied by guards armed with whips, inject virus as inmates uproarously receive them. The insane wards of the City Sanitarium were in an uproar due to the annual visit of the vaccination squad of the Health Department.

"In company with the guards, armed with whips, doctors invaded the cells of the patients in the city sanitarium (a name badly substituted for hospital for the insane), and injected the vaccine virus. About 250 were vaccinated.

"This work has been for several years a trying task for the physicians of the vaccine division of the Health Department. In many cases handcuffs have had to be applied. In one instance chloroform was administered. No strenuous measures had to be resorted to yesterday, however.

"The guards were with the physicians merely as a precautionary measure, it was explained."

What a painful note to go out to friends of these unfortunates that they are to be scourged, if necessary, to induce them, under their delusions, to submit to vaccination and that their malady in certain instances is to be aggravated by the presence of armed guards which always more or less excite or exaggerate certain insane delusions.

WHEN THE MEDICAL COLLEGES SHALL ALL TEACH PSYCHIATRY and put in the hospitals for the insane only medical officers who have diplomas in psychiatry, no such unmedical and, to the insane, perilous methods of enforcement of any needed treatment will be countenanced.

Overaweing with whips and armed guards went out of fashion years ago with the vanishing of Bedlam and the cells and chains of La Charite.

The term cell for the insane, is even now among enlightened philanthropists, a misnomer. These procedures and things have been anachronisms ever since the days of the Yorks and Jukes in English speaking countries.

PARIS' SANITARY CARE OF HER POOR.—Paris supplies its poor children with schooling, clothing, shoes, free books, slates, stationery, maps, appliances and summer outings free withholding this fact from the other pupils.

It provides, at cheap rental, sanitary homes, giving preference to the poorest and the largest families.

It taxes theater tickets ten per cent from which it furnishes every year 15,000 free beds in hospitals and the same number in its asylums. This theater tax fund has also built a maternity hospital where no questions are asked as to paternity.

This is a sanitary salvage worth imitating. For, though it may favor the survival of some of the unfit, it will save others from becoming unfit to live the normal life.

INFLUENCE OF IDIOCY ON PUBLIC LIFE.—Up to the present time, says C. Paget Lapage in his preface to his recent valuable book on feeble-mindedness, the immense importance to our national welfare of effective methods in dealing with the feeble-minded has not been generally realized. The chief object of this book is to emphasize the importance of the subject of mental deficiency and of the prominent place that efficient care of feeble-minded persons should take in the measures for the welfare of the community.

To point out that feeble-mindedness is an inherited taint handed on from generation to generation, and that every feeble-minded person, who is a free and unrestrained agent,

may, by becoming a parent, transmit that taint and so affect tens or hundreds in future generations.

To demonstrate that the only way to deal effectively with this problem is to provide suitable care and supervision, which will last during the whole lifetime of the feeble-minded individual, and to show how much care may best be administered.

What a glorious thing it would be if idiocy could be kept out of our legislative halls and official life by cutting off the supply of imbeciles through prevention at the sexual font. *Amphimixes* is a study for philanthropists, statesmen and patriots, whose prayer is for a sound minded people as well as for breeders of blooded animals.

"MAKE NO DIAGNOSIS of hysteria, neurasthenia, or psychoneurosis in a patient whose symptoms begin after the forty-fifth year. The actual diagnosis is liable to be arterio-sclerosis, hyperthyroidism, dementia paralytica or pernicious anemia," says a contemporary magazine.

Sorry to have to correct this statement of diagnostic error. Oh! No! These may precede, accompany or more often follow psychasthenia, neurasthenia, neuratropia and their induced impaired metabolisms, especially ex-ophthalmic goitre, which the surgeons so often operate upon unjustifiably, but they do not exclude the diagnosis of exhausted nerve centers. Surgical appearances do not always exclude neuropathic diagnoses. They are not always nor often independent of nerve center assault and not always the primary and exclusive cause of neuropathy or psychoneuropathy. The appearance of surgical evidence does not destroy neuropathic fact. The greatest mistake of the modern surgeon, with his anæsthesia antisepsis and facile operative resource is to ignore or lightly regard neuropathic conditions, concomitant, precedent or post operative. Thyroidectomy which has an important place, especially in true surgical goiter is being overdone and needlessly performed in the cardio-exophthalmic form, for true Graves' disease is medicinally and hygienically remediable.

In a long career of neurological practice covering near four decades out of hospital life the writer has never had to turn a case over to the surgeon for cure and but one case was in all

this time ever taken from him and that occurred through gynecological advice. The patient did not survive the oophorectomy, then a prevalent gynecosurgical craze when Battey's star and normal ovariectomy so-called were in the ascendant at and radiating from Rome, Georgia. Thyroidectomy for true exophthalmic goiter is likely to go the way of normal ovarian exsection with all due deference to the skill and ability with which thyroidectomy is now performed, especially in Minnesota.

THE RELATION OF THE MEDICAL PROFESSION TO THE PUBLIC from the address of the president of the Ohio State Medical Association, Dr. W. H. Snyder of Toledo. He says in part:

It is manifestly impossible for so complex and necessary a science as medicine to live without a certain amount of easy articulation with the public. If the profession had not lived so much within itself, but, rather, had spread its ideals and discoveries before the public, antivivisection, Christian science, osteopathy, optometry and mental healing could not have gained ground, except with those who are mentally incompetent. Well-known weekly and monthly magazines have during the past two years probably done more to educate people along correct lines of medical thought than any other single agency. They reach a larger number of people, who are largely visualists, and must see in cold print what is intended for them to know, and, too, are regarded as stating the case more impartially than physicians would. I prophesy that the time will come when the medical profession will be compelled to print a magazine for lay circulation along these very lines, and I suggest that the association seriously consider the establishment of a bureau, which would constantly be influencing the public thought through newspapers, magazines and public addresses.

APROPOS THE HARVARD MEDICAL SCHOOL public lecture, Professor and Ex-President A. M. A. Burrell's address and the following editorial attitude of the *Boston Medical and Surgical Journal* on this subject says:

As to how much the laity should be instructed in matters which at best they can only partially understand, there is a growing feeling that they can be made to appreciate essentials and that their better understanding of medical situations will benefit both patient and physician.

As people acquire more and better knowledge of general medical facts, they will try the "family remedies" less rather than more. Many a case of appendicitis will be saved a long period of drainage when the mothers cease to give castor oil before calling a doctor. In hospitals operations can be better performed, and better nursing obtained than in the home, yet the fear of the hospital, due to the idea that people are taken there only to die, is still an obstruction, though a fading one to the best practice. Consent to operation or other therapeutic measure can often be obtained quickest by a simple statement of the nature of the disease and the purpose of interference.

LORENZ OF VIENNA DEFENDS AMERICAN DOCTORS.—Famous Orthopedic Surgeon refutes article published in Vienna and praises medical men of this country.

The Pacific Medical Journal gives the following quotations from Prof. Lorenz and it may give some Americans a better opinion than some of them sometimes express of American medical institutions, especially the creature who coined the slander "commercial school" and applied the epithet to some of the best medical colleges of this country—colleges as good also as in any other country.

"I cannot speak too highly of the American doctor, who, after severe struggles, has obtained a practice, has married in the meantime, is perhaps the father of a child or two, and, when he has saved enough, gives up his practice, his home and the safety of his future to go to Europe in search of knowledge or with a view to becoming a specialist. I have seen them bring their wives and children along and take up the battle of life with them. * * *

"I have seen innumerable institutions in America, medical ones among them, by the side of which we have nothing to show. And where the technical sciences are applied to medi-

cine we have much to learn from America already and will have more to learn in the future.

"With regard to my own orthopedic specialty, I could speak without envy of the hospitals in which my American colleagues and disciples are at work amid all the perfections which science can demand. In Vienna the orthopedic school of the university, which is expected to help thousands of unfortunate children from the whole empire and to teach hundreds of doctors from all parts of the world, occupies one room only, and that formerly a back kitchen of the general hospital.

"I do not think that 'far down South' or in the 'far wild West' there is a medical school bad enough to compete with it."

THE NATIONAL COMMISSION ON INDUSTRIAL HYGIENE demands public and professional attention to the prevention of occupational neuroses and wisely advises as follows:

"Natural resources are of no avail without men and women to develop them, and only a strong and sound citizenship can make a nation permanently great. We cannot too soon enter on the duty of conserving our chief source of strength by the prevention of disease and the prolongation of life."

EDUCATION AND SANITATION, now the chief subjects of consideration in our legislatures in connection with renationalization was the keynote of the Independence Day address by Charles W. Dabney, president of the University of Cincinnati, and former president of the University of Tennessee.

ARTERIAL HYPERTENSION.—Rudolph in the *British Medical Journal* takes a very sensible and physiologically justifiable as well as clinically correct view of arterial hypertension. Following are the chief points of the paper:

Toxemia causing arterial disease by directly poisoning the vessel walls. Such a poison is nicotine, immediately raising the blood pressure.

Probably many such toxins are manufactured in the alimentary tract or body tissues. Some toxins cause no arteriosclerosis but directly raise blood pressure. In an arteriosclerotic patient the adrenal tissues from time to time over active, may produce periodic increased blood pressure in the non-arteriosclerotic.

He maintains that there is a compensatory hypertension as when some vital tissues, as those in the medulla, become anemic in places from neoplasm pressure, the blood pressure then rising enormously with the seeming object of forcing blood at all hazards into the part needing it.

If a part of the brain be supplied by vessels the lumen of which is much narrowed by disease, it is likely that the blood pressure will rise from the same cause. It is very common to find the blood pressure high from simple nervousness, he says most truly, and if an arteriosclerotic happens to be also a neurasthenic his pressure may be high from this cause alone. Lastly, the raised pressure may be due to the arterial disease alone, and in this case probably the splanchnic vessels, or the aorta leading to them, are extensively diseased.

All of which is most true in neuropathic and psychopathic clinical observation and medical men would do well to bear these facts constantly in mind in their interpretation of arterial and arteriole and their varying consequences. Man may be "as old as his arteries," but not always so old as his arterial tension might suggest to the physician of limited opportunity for observation. Our judgment should not be too narrow here.

A CLINIC FOR INDUSTRIAL DISEASES. John B. Andrews, Secretary American Association for Labor Legislation. Where Italy leads. The first clinic for industrial diseases, recently dedicated at Milan. Reprinted from *The Survey*, November 12, 1910.

Some of us had hoped that industrial America, with its wonderful resources, its famed philanthropies and its uncounted thousands of work-diseased men and women, might be first among nations to recognize the need of a special hospital and clinic for industrial diseases. But the honor belongs to Italy.

Eight years ago a group of social-minded medical men in Milan united in a demand for systematic study of diseases of occupation. Four years ago they called together from many nations the first International Congress on Industrial Diseases. Last March they saw the hopes of years culminate in the dedication of the first labor clinic.

"For the scientific study and prevention of occupational diseases," is the inscription in letters of gold on a background of white marble over the entrance of this unique hospital.

We may hope for better things when a more considerate concern for our fellows finds lodgment in the hearts and heads of our confederated captains of industry and charity tones down greed to the Christian proportions of the Golden Rule. Then will our factories and mines that undermine the health and needlessly take away the lives of the workers, become things of joy to the handicraftsmen and delvers rather than promoters of disease, degeneracy and sudden death.

THE ELIMINATION OF MICROBES from the blood stream, having much to do with neuropathic, neurophysiologic and psychopathic problems, it is well for the neuriater and the psychiatrist to bear in mind the biologic results obtained by Hess (Arch. Int. Med.) showing the liver to be the chief and most efficient eliminant; the kidneys playing a comparatively minor part in the eugenics of the *vis medicatrix naturae*.

Thus under the new as well as under the old *ars medicinae* the liver is the best of the assisting friends of Hygeia in clinico-therapeutic endeavor. It helps as greatly now as in the past to clean out the toxic microbes, *i. e.*, the peccant humors of our forefathers in medicine and is not more to be neglected therapeutically now than it was then.

"THE GERMAN CENTRAL SOCIETY," says *The Hospital*, "has decided to build a house for the pedagogic education of 'psychopathic children.' In the same way the college of Prussia has resolved to organize a 'whooping cough colony' at the seaside. Houses for families are to be built near a forest, separated from each other by a plantation."

This is sanitary progress. It would be a good idea to invite the latter colony to locate at St. Louis to "whoop up" the city to counteract the silly St. Louis shibboleth "save St. Louis" for the liquor interest, a whoop in the wrong direction with right-minded people.

EXTERMINATING THE INCURABLY MENTALLY DEFECTIVE is the remedy proposed by a Missouri physician but who shall decide on the curability of these psychopaths and on whom to classify as such and why stop at the inmates of the eleemosynary institutions, when there are so many idiots, imbeciles and insane outside of them?

If we could corral the idiots alone who are at large and stop their progeny engendering propensities and consequently their increase, we might hope for greater ultimate psychic stability in human affairs, especially in legislation.

Not a few physicians might be caught in the net for psychopaths, also, and contribute to the ascendancy of the stable psychic neurone in matters of moment in this defective degenerate world of ours.

EDUCATION THAT DOES NOT EDUCATE.—Last May it was reported from Middletown, Conn., that eight unstably neuronated Wesleyan freshmen returning from their annual class banquet were arrested as the result of an escapade in which sixty of their class participated.

The banquet was held in Farmington, the class returning about two o'clock the next morning.

On arriving in town the students repaired to the grounds of the Russell Library, where a large stack of revolutionary cannon balls are kept. Each student in the party seized a cannon ball, climbed to the top of College Street Hill and commenced rolling them down the incline on the sidewalks regardless of consequences.

And this among students of an institution founded in the name of the immortal Wesley and designed to establish the going and coming of young men in right paths of propriety and in the shadow of one of the best lunatic asylums in that good little state.

These students evidently were sent to the wrong institution. Education that does not make the brain stable but leaves lunatic impulses unrestrained does not educate.

DROWNED AND FLOATING UPRIGHT.—A man with his neck broken was found drowned and head upright in deep water in a St. Louis County pond. This was a case of sudden shock, cadaveric rigidity coming on under water or just before the drowning, and points to foul play and sudden death-dealing violence, as the coroner expressed, but the coroner's jury's verdict was "cause unknown." A few of the right sort of enlightened men on that jury might have concurred in the conclusion of the coroner, Dr. Bracy, the only medical man among them.

NOT ENOUGH PHYSICIANS.—A recent case of collar-bone fracture and quasi brain concussion coming to a motorcycle rider and the sequent rather rough handling of the man by the police who reached the usual conclusion of intoxication and who did not, of course, detect the fracture and the frequent police mistakes of brain congestion suggests the importance of medical and surgical attendants at all police district headquarters.

When the public shall come to rightly realize the great need of medical emergency aid in the many schools, factories, excursions, public assemblages, etc., now unprovided it will turn attention to systematic medical provision now ignorantly neglected and the recent senseless cry of "too many doctors" will cease to be heard in the land.

DR. ABRAHAM JACOBI received the long and well-merited honor of presidency of the American Medical Association at the late Los Angeles meeting. Cool Atlantic City is the place selected for the 1912 meeting.

BARON WILLIAM OSLER is what we are to call him now when we go "over there" to greet him. But it is a pity that our genial friend, late of Johns Hopkins, is growing old. He might otherwise live to be king. Then we would all go to the

coronation. He is the prince of good fellows anyway and more than a prince in capability and talent.

THE BURDEN RASCALITY IMPOSES ON INTEGRITY weights honesty with woes and worries innumerable, keeps Congresses, Legislatures, official departments, society and honest enterprise busy with espionage and defensive regulation, burdensome to those of good intent and all who would, of their own volition and unurged, walk and do uprightly.

Yet there are those who maintain that morbid vice and crime should not be prevented from propagating a further viciously degenerate humanity.

The Boston Common for November 12, 1910, had an excellent and convincing contribution on Our Neglected Insane, showing insufficient accommodation, inadequate treatment and what Massachusetts should do at once to correct these shortcomings, by L. Vernon Briggs, M. D., physician to the Mental Department of the Boston Dispensary. All too true and the evil has not been corrected yet.

"If there is any one class of our citizens who need the sympathy, support and continued interest of the public more than any other, that class is the so-called insane."

DR. JOHN B. CHAPIN, chief of the Insane Department of the Pennsylvania Hospital, Philadelphia, has retired.

DR. HENRY M. HURD has resigned the superintendency of Johns Hopkins Hospital, after having served twenty-two years. He will remain as secretary and advisor of the board of trustees. Dr. Winford H. Smith, general medical superintendent of Bellevue and Allied Hospitals, New York City, has been elected as Dr. Hurd's successor.

PROFESSOR LANGE'S TRAVEL TRIBUTE TO AMERICA.—Americans will be gratified to read in *Münchener Medizinische Wochenschrift* the complimentary tribute of the Munich physician to America's great "possibilities, adaptability" and advance in matters medical.

He has seen America as an advanced example to the rest of the world in the near coming future.

DR. WILEY.—A cabinet officer himself having employed associate counsel in his work at far greater expense thinks Dr. Wiley should step down and out for wishing to be sure he was right by calling to the aid of his department expert chemical skill. This so-called irregularity of Dr. Wiley is a meritorious act for the good of the people.

Do not go out, doctor, till they kick you out. If they do the people will have you back. The popular crusade is on for pure food, pure drink, pure air, pure statesmen and purity generally and public welfare so far as they can be secured.

PELLAGRA has made its appearance at the St. Joseph (Missouri) Hospital for the insane, as reported recently by the medical superintendent.

CORRESPONDENCE.

Topeka, Kansas, April 27, 1911.

TWO LEGAL WRONGS FOR ONE RIGHTED.

DR. CHAS. H. HUGHES,
3858 West Pine St.,
St. Louis, Mo.

DEAR DOCTOR:—In *The Alienist and Neurologist* of November, I happen to note therein the editorial on the "Unfair Trial and Conviction of a Physician," referring of course to Dr. Hyde of Kansas City. I followed this case record in the newspapers and came to the same conclusions as your editorial.

I am glad to note, no doubt of which you are also aware, that the Supreme Court reversed the action of the Lower Court and that the doctor will at least be liberated on bail.

Personally I consider his incarceration an outrage on the profession and common decency, from the fact that he never was convicted of anything and with the judgment of a lay jury, having no medical knowledge and apparently very little reasoning faculty, was consigned to the jail where he has languished all this time.

I have always believed that a jury trial unless it could be by one's peers, is an unjust, unfair and especially in professional lines, a discredit to the state and the community.

What could a lay jury know about sclerosis or coma or an apoplectic condition of any degree, much less the effect of a poisonous acid?

Incidentally I note that Circuit Judge Williams, of St. Louis, holds that "life legally commences at birth." How about our friend the midwife and many others who have been convicted, fined and given prison sentence on account of inter-

ference with a "viable" foetus; it seems to me that the judge was treading dangerous ground. It is true that "breath comes with the birth," but there is evidently life before breath. I think your statement "viability" as known by the physicians and to mothers, occurs at about the time of the "first kick."

Yours sincerely and fraternally,

E. S. PETTYJOHN,

National Medical Director.

EDITOR ALIENIST AND NEUROLOGIST,

St. Louis, Mo.

DEAR SIR:—The American Red Cross announced, in connection with the International Conference of the Red Cross which was held at Washington, D. C., in May, 1912, that the Marie Feodorovna prizes were awarded. These prizes represent the interest on a fund of 100,000 rubles which the Dowager Empress of Russia established some ten years ago for the purpose of diminishing the sufferings of sick and wounded in war. Prizes are awarded at intervals of five years, and this is the second occasion of this character. These prizes are: 1 of 6,000 rubles, 2 of 3,000 rubles each, 6 of 1,000 rubles each. The subjects decided upon for the competition are: Organization of evacuation methods for wounded on the battle field, involving as much economy as possible in bearers; surgeon's portable lavatories for war, methods of applying dressings at aid stations and in ambulances, wheeled stretchers, support for a stretcher on the back of a mule, easily portable folding stretcher, transport of wounded between men of war and hospital-vessels and the coast, best method of heating railroad cars by a system independent of steam from the locomotive, best model of a portable Roentgen-ray apparatus, permitting utilization of X-rays on the battle field and at the first aid stations. It rests with the jury of award how the prizes will be allotted in respect to the various subjects. That is to say, the largest prize will be awarded for the best solution of any question irrespective of what the question may be.

Very respectfully,

CHARLES LYNCE,

Major Med. Corps, U. S. Army,
Chairman Exhibit Committee.

OBITUARY.

DR. FRANK P. FOSTER.—We join in the general regret over the death of our editorial contemporary and friend, Dr. Frank P. Foster, the former veteran editor of the *New York Medical Journal* and of Foster's dictionary. He was genial, cordial, competent in his vocation and all the personal and professional relations, a worthy man of merit and esteem.

REVIEWS, BOOK NOTICES, REPRINTS, ETC.

MEDICAL ETHICS, PUBLICITY AND PROMOTION. By G. Frank Lydston, M. D., Professor of Surgical Diseases of the Genito-Urinary Organs, Medical Department, University of Illinois, Chicago.

Among other things of interest the doctor says:

The light under a bushel commandment has been a stumbling-block in the way of the social advancement of the profession. The doctor has no particular social, commercial, financial or political standing. He is a nonentity in the community. Why? Simply because of the bigotry and intolerance of the profession itself. The doctor who makes a political speech, or receives legitimate newspaper mention, at once becomes a target for professional abuse and vilification. This, despite the fact that the doctor has the same rights as other decent citizens. Aye, despite the fact that it is the duty of every man to be as prominent in the important affairs of life as his professional position, tastes and attainments will permit.

Time was when Woods Hutchinson would have been ostracised by the profession, yet he has done the profession great good by discreetly taking the public into our confidence and educating the people in those things which are legitimately the people's. Are his articles any less valuable because he himself has incidentally received some profitable publicity, and probably some direct compensation? Is not the laborer worthy of his hire? Would it be just to throw him upon the ethical dump along with men who guarantee cures in paid ads, and those who "dead head" ads of their wonderful discoveries and marvelous surgical exploits?

Blessed be he who dispels the fog of medical mystery and meets the inroads of quackery by enlightenment of the public, and thrice blessed be he who legitimately aggrandizes the profession in the estimation of the public, even though he does

thereby give himself some individual prominence. Within reasonable limits he cannot appear in the public eye without adding to the social importance of his profession. Pity 'tis that the press does not understand obvious ethical distinctions between matters of general interest and stuff which should appear as paid ads. Still, perhaps it does—were the truth known—and always has an eye to business. Would that we might see the ledger.

This much the profession should understand, viz.: The right kind of publicity alone will give the medical man his proper place in our social system. By failing to mix common sense with its ethics the profession has lost the opportunity of making itself a power in the land.

Out of the muck of the ethical imbecility of the Fathers, the prohibition of the patenting of his inventions by the physician shines like the traditional dead mackerel in the moonlight. Hospitals may profit by the products of your genius; other doctors may charge liberally for using the instruments you have invented; instrument houses may wax fat on the sales thereof—charging you exorbitantly for making the pattern instrument—but you must not partake of the fruits of your own brain! And how consistent we are. Did not a high-powered official of the A. M. A. patent something or other some years ago? But that was different, wasn't it?

ONE COPY OF *The Altruist* a long time ago, came to our review table and no more. It was devoted to the principles of Altruism and to the general betterment of sociological conditions, alcohol and its relation to the sciences. It was a medico-scientific number and contained real truths about the harm of alcohol to the human organism taken from real scientific sources. It was published by the Altruist Publishing Co., of Atlanta, Ga., and told what Liebig and Atwater and Chittenden and Kellogg and Weir Mitchell and Willis Parks, Conrad Wyman, W. T. Ellis and Cora Frances Stoddard and Lewis H. Palmer said pro and con on the subject and did much good and if living yet it must be doing still more good in true scientific enlightenment concerning this mocker

beverage that has deceived and harmed mankind, including woman, so long.

It is a school physiological journal and if it yet goes to school it is going to the right place for the saving of this nation and the brain fiber of its people. Here is one of its final abstracts:

"I would teach our children less grammar, or the anatomy of language, and more anatomy of their own bodies. I would teach less about the ruins of Africa and Asia, and more about the ruins of blood in their own bodies. I would teach them less of the products of some far-off land, and more about the products of their own indiscretions. I would teach them less about the Latin and Greek roots, and more about the danger from roots of decayed teeth in their mouths. I would teach them that cleanliness is next to godliness, and that a daily cold-water bath is a better tonic than any medicine. I would teach them that to be sick from preventable causes is a sin. I would have them taught by somebody that the sexual functions are holy, and have them warned of the terrible results following their abuse. I would have them taught the benefits of pure, fresh air from open windows in their sleeping rooms. I would have an oversight over their play that it might be along health and strength-giving lines. I would have them led along lines near nature, to love the flowers, the birds, and the trees, to love good reading and good people. In short I would teach them to know themselves. These are high ideals, I know, but we can try for them, and the effort is a lift upward. The best work of the world has been done by those having a sound mind in a sound body. An education that caters only or chiefly to the head and heart fails in its highest possibilities. To be efficient to the fullest extent one must have physical health and strength, as well as character and mental ability."—Lewis H. Palmer, M. D., in *Journal of Education*.

THE WORLD OF DREAMS. By Havelock Ellis, Boston, Houghton, Mifflin & Co., 1911.

The dream is once more assuming a prominence in medical psychology which it had in the 50s, 60s and 70s of the nine-

teenth century and earlier. The great American alienist, Rush, did not, following the example of the older masters in medicine, disdain to discuss dreams. Hammond, O'Dea, Spitzka and others of the New York psychological group of the 60s to 80s were followed by Dana in the 90s in recognition of the importance of dreams. With the flood of Freudism which makes the exciting cause all that is important and ignores, in a manner, ominous of charlatanism, all other elements of the etiologic moment, dreams have become things of supreme importance to the "abnormal" psychologists and the "psycho-analysts." The concepts of the Freud school are based on that occult spiritualism in the material characteristic of primitive man. Dreams, despite the experiments of Maury, O'Dea and others, are never the product of pathologic or physiologic states rising into the uninhibited sleep consciousness, but always the result of a wish content of the "ego" which Freud regards as always fully formed, never a co-ordination or product of evolution, but always, even in childhood, springing into existence complete. "Most writers on dreams," remarks Havelock Ellis, "hold that there are two sources from which the elements of dreams are drawn; the vast reservoir of memories and the actual physical sensations experienced at the moment of dreaming and interpreted by sleeping consciousness." The recognition of these groups is as old as Aristotle. Fairly convenient names are those adopted by Miss Calkins, who calls the first group representative and the second group presentative; meaning by representative connected through the fact of association with the waking life of the past and the presentative through excitation with the immediate present. The representative falls into two subdivisions accordingly as the memories are of old or of recent date; these subdivisions are often quite distinct, recent dream memories belonging probably with most people to the previous day, while old dream memories are drawn from the experience of many years past and frequently from early life. In the same way presentative impressions fall into two subdivisions accordingly as they refer to external stimuli present to the senses or internal disturbance within the organism. "Strictly speaking the source of a dream as a dream can only be central and a truly presentative dream is impossible." The

book is excellently written in clear diction, but under the stress of the pruriency of the publishers medicolegal data of much importance are enforcedly omitted. Perhaps to the suggestibility nature of the world of dreams is underestimated. As a whole the book is the contribution of most value so far made to the psychology of dreaming.

JAS. G. KIERNAN.

THE FLY FIGHTERS OF THE CIVIC LEAGUE send us some good sample literature which if well distributed and its suggestions put in practice, ought to do much toward preventing the race suicide which Mr. Roosevelt and all other intelligent and philanthropic citizens deplore.

Of course the fly on the nipple of the nursing bottle while the nurse may be entertaining a policeman, may cut short the life of a prospective undesirable, but it also kills many prospective good infants, just as the flies depicted on the fish in the fly catchers' illustration pictures may destroy a saint in incipency.

The letter to summer resort hotel proprietors is good and timely. There are too many flies on them and their tables and there are too many fly-breeding things and places in and about the culinary departments of many of them.

Fortunately for health and life the automobile garage is substituting the stables too near the kitchens of many of these country *health* resorts. Some of our city hotels and homes might also profit by this literature concerning the deadly doings of the dirty fly.

The microscope has revealed much since the stinking savor of the fly in the apothecary's ointment was used in holy writ, as an illustration, of pernicious influences. In soup and drink and viands disease and death go with the fly.

NURSING THE INSANE. By Clara Barrus, M. D., Woman Assistant Physician in the Middletown State Homeopathic Hospital, Middletown, N. Y., New York, The Macmillan Company.

This interesting and instructive book dedicated to the nurses of the Middletown Connecticut Hospital in grateful

recognition of their fidelity in the care of mental invalids is a book inspired by experienced observation from the standpoint of an inside view of right observation of the class of patients it is designed to benefit and can be profitably read by all nurses and physicians to the insane.

Its keynote is careful concern for the personal welfare of the patients and watchfulness of their needs and habits.

It enjoins that good hygienic housekeeping that cleans the dark corners, upper shelves and behind the radiators and under the mats and that considers the bodily adornment the head and the "foot gear" of the attendant.

We do not concur in all the medical views as to treatment. Nurses are too prone to discuss this subject from the little learning point of view but the book is a good one and well intended.

MERCK'S MANUAL OF THE MATERIA MEDICA. (Fourth Edition.) A Ready Reference Pocket Book for the Physician and Surgeon. Containing a comprehensive list of Chemicals and Drugs—not confined to "Merck's"—with their synonyms, solubilities, physiological effects, therapeutic uses, doses, incompatibles, antidotes, etc.; a table of Therapeutic Indications, with interspersed paragraphs on Bedside Diagnosis, and a collection of Prescription Formulas, beginning under the indication "Abortion" and ending with "Yellow Fever;" a Classification of Medicaments; and Miscellany, comprising Poisoning and Its Treatment; and an extensive Dose Table; a chapter on Urinalysis and various tables, etc. (Merck & Co., 45 Park Place, New York, 1911. 493 pages. Sent on receipt of forwarding charges of 10 cents, in stamps, to physicians, or to students enrolled in any College of Medicine in the United States.)

VIRGINIA HEALTH BULLETIN for May, 1911, tells what our people should know about cancer, saying: "This dread malady appears to be increasing and must be combated.

"We have not found the cause, but we have learned much about the cure. This bulletin gives the substance of our knowledge and the basis of our hopes to reduce the mortality."

It is wise for health boards to keep on thus advising the people on their disease perils, presenting at least one subject thoroughly at a time. Exemption will come bye and bye from knowledge thus diffused among the people with means of escaping and combating disease.

Tuberculosis, the social evil, the neuropathic diathesis and the causes and prevention of insanity, epilepsy, idiocy, etc., should be diffused among the people. The New England, Western and Southern and Central states are doing as Virginia is doing.

RECENT RESEARCHES IN MENTAL MEDICINE, especially in the Etiology and Treatment of Dementia Præcox and General Paralysis from the Hahnemannian Monthly, by L. Vernon Briggs, M. D., Boston, Mass.

This subject is well and entertainingly treated, especially with reference to the significance of the Wasserman reaction in tabes and paresis and the luetic origin of both. The paper is thoroughly clinical and refreshingly historical.

REPORTS OF THE PATHOLOGICAL DEPARTMENT OF THE CENTRAL INDIANA HOSPITAL FOR THE INSANE, George F. Edenharter, M. D., Superintendent, is before us for 1910-1911. These reports show great progress in this line of work.

The third volume contains a clinical summary, which is a new departure and to which we direct special attention of our readers.

This worthy work is in the right direction for the enlightenment of the medical and legal professions and Dr. George F. Edenharter, the accomplished and painstaking superintendent, deserves the medical and legal professions' thanks for what he shows from his clinico-pathological records.

THE MISSOURI RED BOOK, with the compliments of the Bureau of Labor Statistics and J. C. A. Hiller, the commissioner, of Labor, assisted by J. H. Nolen, Deputy Com. and A. T. Edmonston, Supervisor of Statistics and C. O. Cornelius, Special Agent, is received.

This book will prove gratifyingly interesting to every

Missourian and surprisingly so to every one concerned about progress in right direction of morals, education and resources of the greater or lesser states.

The right relations of labor to capital and of capital and resources to labor are here intelligently shown.

LA SINDROME PARIETALE ESTRATTO DAL FAS. III. e. dell'anno XXVIII. Prof. Leonardo Bianchi, Direttore della Clinica delle Malattie Mentali e Nervose, Napoli, 1910.

We acknowledge the receipt of this splendid and elaborately illustrated contribution to the literature of this subject, interesting to all neurologists and especially those on this side of the Atlantic who have been accustomed to enjoy the enlightening products of the author's facile, fertile pen.

THE AMERICAN JOURNAL OF PSYCHOLOGY, besides the following interesting articles, Sarah E. Barnholt and Madison Bentley, Thermal Intensity and the Area of Stimulus; Edmund Jacobson, Consciousness Under Anæsthetics; Alma de Vries Schaub on The Intensity of Images; Samuel P. Hayes, The Color Sensations of the Partially Color Blind; Rudolph Acher, Recent Freudian Literature; Knight Dunlap, Terminology in the Field of Sensation and book reviews and notes this valuable magazine (vol. 22, number 3) has a well merited memorial tribute to one of Texas' most esteemed and worthy scientists, Dr. Edmund Montgomery.

A CLINICAL SERVICE IN OUR STATE HOSPITALS. Frank P. Norbury, M. D., Superintendent of the Kankakee State Hospital, Kankakee, Ill. From the *Illinois Medical Journal*, February, 1911.

A good subject timely and well presented. Clinical services and biological and micro chemical and hematological laboratories might well supplement and in some instances, when funds are limited for all, might better supplant state association medical journals.

THE MODERATE DRINKER. By L. D. Mason, M. D., Vice-President American Society for the Study of Alcohol and Other Narcotics.

This brochure maintains that: The term moderate drinking cannot be used in a scientific or practical or safe sense. A prevalent and popular fallacy is that the moderate drinker may always remain as such.

Ophthalmia Neonatorum is a reproach to our age—a plea for penal enactment against the ignorant and careless creatures that cause this awful calamity to helpless babes at birth. Midwives, mothers and careless doctors should all be responsible for this crime of antiseptic omission.

A woman at childbirth should be antiseptic in the *prima via* of the new life and in all pertaining to the foetus undergoing transformation into the viability of such as are to walk the earth from out the mother's womb.

The National Temperance Society Publication House, 3 East 14th St., New York, are sending out an "appeal to the people" to the extent of 35,000 copies. A second edition of more complete list of signers is to be issued.

This document is, perhaps, the most influentially signed international address ever drawn up and dispatched to a single community. The list of American signers is large and noteworthy for intelligence and scientific culture.

Science in this document confirms the conviction of the wise man that alcoholics are mockers and "Whosoever is deceived therein is not wise."

Dietetics with Reference to Diet in Disease by Alida Frances Pattee, Graduate Department of Household Arts, State Normal School, Farmington, Mass., late Instructor in Dietetics, Bellevue Training School for Nurses, Bellevue Hospital, New York City, former Instructor at Mount Sinai, Hahnemann and the Flower Hospital Training Schools for Nurses, New York City, etc. Sixth Edition. A. F. Pattee, Publisher, Mount Vernon, New York.

A book of valuable suggestions for nurses from a source of practical hospital and bedside experience as a portion of the responsible positions held by the author will show.

We have received with the compliments of the authors "A Study of Association in Insanity," by Grace Helen Kent, A. M. and A. J. Rosanoff, M. D., Kings Park Hospital, N. Y.

This is a labored and painstaking study in an interesting phase of clinical psychiatry which should especially interest and profit medical officers of insane hospitals. Reprinted from the *Journal of Insanity*.

Cacodylate of Sodium in the Treatment of Syphilis. By O. L. Suggett, M. D., St. Louis. Reprinted from the *New York Medical Journal*.

This number is completed with other meritorious features like Berry Hart's, Hautian's and Johnstone's valuable contributions. This number would not have been complete without the Simpson memoirs. Sir James Y. Simpson's biography and the pictures, incidents and other descriptions connected with Simpson's discovery of chloroform in the memorial number of the June *Edinburgh Medical Journal* should be in every library.

Dannemora State Hospital for Insane Convicts. Eleventh Annual Report, 1910. The two men discharged as not insane were admitted at the same time by transfer from Sing Sing. They were malingerers and one of them, who had been admitted to the hospital twice before while serving other terms, coached the other. The attempt to feign insanity was persisted in for but a short time after admission, both men finally admitting the truth.

Degenerations of Intracellular Neurofibrils with Miliary Gliosis in Psychoses of the Senile Period. By Albert M. Barrett, M. D., from the State Psychopathic Hospital at the University of Michigan. From *American Journal of Insanity*.

Psychoses Associated with Acute Infectious Diseases. By Albert M. Barrett, M. D., Professor of Psychiatry and Diseases of the Nervous System, University of Michigan. Reprinted from *The Cleveland Medical Journal*, December.

Popular Fallacies About Insanity. A Public Lecture delivered in the Free Public Lecture Course on Medical Subjects at the Harvard Medical School. By Henry R. Stedman, M. D., Brookline, Mass. From the *Boston Medical and Surgical Journal*.

A Suggestion on the Introduction of the Needle into the Vein in Making Intravenous Injections of "606." By Edgar G. Ballenger, M. D., and O. F. Elder, M. D., Atlanta, Ga. Reprint from *Journal-Record of Medicine*.

Hysteria; With Especial Reference to Diagnosis. By David S. Booth, M. D., of St. Louis, Neurologist to the Hospital Department of the Missouri Pacific-Iron Mountain, and St. Louis South-Western Railway Companies, Neurologist to Baptist Hospital, etc. Reprinted from *The General Practitioner*.

The Grinnell Review represents the best college for the making of men in that state. It is devoted to the interests of Grinnell College and its graduates. It was the school of our youth and represented in its earlier days as it does now the best instructive talent in that state.

Message of the President of the United States in Response to Senate Resolution, June 27, 1911.

The newspapers have discussed this timely message so thoroughly that it is not necessary that we should do more than acknowledge its receipt.

The Organic Basis of Neurasthenia. By John M. Swan, M. D., Watkins, N. Y., and Charles Clyde Sutter, M. D., Watkins, N. Y. Reprinted from the *New York Medical Journal*.

Some Observations on the Use of Guipsine as an Apressor Remedy in Cases of High Arterial Blood Pressure. By O. K. Williamson, M. D., F. R. C. P., Physician to the City of London Hospital for Diseases of the Chest, Victoria Park, etc. From "*The Practitioner*," May, 1911.

Practice Effects in Free Association. By Frederic Lyman Wells, Ph. D. From the *American Journal of Psychology*.

Review of Kent's and Rosanoff's "A Study of Association in Insanity." Frederic Lyman Wells..from the *American Journal of Psychology*.

Some Properties of the Free Association Time. By Frederic Lyman Wells, Ph. D., from the *American Journal of Psychology*.

Seventeenth Report of the Kankakee State Hospital at Kankakee, Illinois.

Genital Canal Block Following Neisser Coccus Infection. By Charles E. Barnett, M. D., of Fort Wayne, Ind. Read before the Mississippi Valley Medical Association.

Report of the Poliomyelitis Committee of the Medical Association of the District of Columbia Epidemic, 1910. An important report of interest to all physicians. Reprinted from *Washington Medical Annals*, Vol. X, No. 2, May, 1911.

Pellagra in Buffalo. By Grover W. Wende, M. D., Buffalo, N. Y. Reprint from *Buffalo Medical Journal*, May, 1911.

Glycosuria. By S. H. Blodgett, M. D., 419 Boylston Street, Boston, Mass. Specialist in Urinary Diseases, Massachusetts Homœopathic Hospital. Reprinted from *North American Journal of Homœopathy*, April, 1911.

Insanity Among Adolescent Criminals. By Charles H. North, M. D., Dannemora, N. Y., from proceedings of the American Medico-Psychological Association. Showing interesting clinical records of imbecility with hemoglobin count of 90 and 95 per cent in two.

Observations on the Surgery of Tetanus. By G. Wiley Broome, M. D., St. Louis, Mo. Reprint from *The Southern Medical Journal*, October, 1910.

The Prevalence and Psychology of Pellagra. By J. W. Babcock, Physician and Superintendent, State Hospital for the Insane, Columbia, S. C. An excellent portrayal of the subject. See selections. From proceedings of the American Medico-Psychological Association.

Litora Aliena. By Medicus Peregrinus. "Peregrinum ut ivseret orbem." Boston. W. M. Leonard, 101 Tremont Street, 1911.

The Increase of Insanity. By J. T. Searcy, Superintendent of the Alabama Insane Hospital.

Recent Tendencies in Ophthalmic Therapy. By John Green, Jr., M. D. From *Interstate Medical Journal*.

Hemianopsia. A Review of Recent Literature. By John Green, Jr., M. D., St. Louis, Mo.

The Art of Refraction. By John Green, Jr., M. D., St. Louis, Mo.

Report of the Superintendent of the State Hospital for Inebriates at Knoxville, Iowa, to the Board of Control of State Institutions.

Ozone. By Milton W. Franklin, M. D., Schenectady, N. Y.

The Prevention of Blindness. By John Green, Jr., M. D., St. Louis.

"The Bible and Wine." By Ferrar Fenton, M. R. A. S., etc. A Review, By L. D. Mason, M. D.

Incipient Insanity. By William Francis Drewry, M. D., Petersburg, Va.

The Arylarsonates in the Treatment of Syphilis and Pellagra. E. H. Martin, M. D., Hot Springs, Ark.

Feeding of Infants in Diarrhoea

MELLIN'S FOOD

2 level tablespoonsfuls

WATER

8 fluidounces

Analysis of above mixture:

Fat	trace
Proteids (cereal)	.56
Carbohydrates (no starch)	4.33
Salts	.23
Water	94.88
	<u>100.00</u>

Calories per fluidounce=6.2

To be given cold or very warm, (never luke-warm) in small amounts, frequently repeated, for a day or more, or until stools lessen in number and improve in character.

Then milk may be added in small quantities until full diet is reached.

We cannot emphasize too strongly the benefit of such a diet in all forms of Summer diarrhoea.

Additional formulas may be found in our book, "Formulas for Infant Feeding," which will be sent free upon request.

Mellin's Food Company,

Boston, Mass.

PUBLISHER'S DEPARTMENT.

ITINERANT MORPHINE AND COCAINE TABLET PEDDLERS.—

A man described as about 5 feet 10 inches, light brown hair, wearing a light gray overcoat, well dressed, nice looking, with a nice way, seeming to know the price of morphine and cocaine, etc., called on the Hort-Schaeffer Drug Co., Omaha, Neb., about January 23rd, and tried to sell 5,000 H. T. 26 P. D. & Co. at \$5 per M; said he had sold 30,000 already and had 5,000 more to sell. Refused to call again to see Mr. Hort. When the clerk tried to get finishing number he took package away from him with the remark: "If you don't want them o. k., I can sell them without any trouble." He claimed to be from the East—either New York or Philadelphia—saying he sold different things at different times, and now was the time to get in easy as morphine, etc., was going up all the time.

DOCTORS' ROW TO COURT, LYDSTON COMPLAINANT. Suit is filed to compel Wayman to start ouster proceedings against the American Medical Association trustees.

Efforts to oust the trustees of the American Medical Association and throw the bitter factional fight in that body into the courts yesterday took the form of a suit to compel State's Attorney Wayman to begin ouster proceedings against the trustees.

Dr. G. Frank Lydston, head of one of the warring factions, and who appears in the present suit as complainant, charges that the association has been run as an "autocratic and despotic corporation," and that it has been doing business illegally for ten years.

CALLS MEMBERS POWERLESS.

The rank and file of the physicians who make up its mem-

Waukesha Springs Sanitarium



For the care and treatment of

**Nervous
and
Mental Diseases**

New, Absolutely fireproof Building.

BYRON M. CAPLES, M.D., Superintendent, Waukesha, Wis.

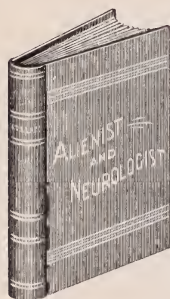
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bership, according to his assertions, have nothing to say about the management of the association.

The mandamus suit, filed by Attorneys Seymour Stedman and Charles H. Soelke, revealed that efforts had been made to procure Mr. Wayman's signature to quo warranto proceedings against the trustees in June of last year, but that Mr. Wayman refused to attach his name to the document.

So Dr. Lydston and his followers carried their fight to Springfield. There the attorney general refused to sanction the proceedings, which required his sanction under law.

SUIT IS LAST RESORT

The only means now open to the Lydston faction is that of compelling the state's attorney, by court order, to sanction the ouster proceedings.

The trustees who have aroused Dr. Lydston's ire are Drs. Frank J. Lutz, W. W. Grant, C. E. Cantrell, N. L. Harris, William Councilman and C. Dougherty.

The chief contention in the suit is that the election at which these trustees obtained office was held in St. Louis. Dr. Lydston's lawyers assert that this was illegal, as the association is an Illinois corporation.

FORM A LEAGUE TO CORRECT MEDICAL PROFESSION ABUSES. Chicago doctors incorporate organization which also will seek political representation.

With the avowed object of correcting abuses in the medical profession, securing political representation and a general betterment of conditions for physicians and surgeons the American Medico-Political Reform League has been launched in Chicago.

The league received its incorporation papers from Secretary of State Rose, Dec. 30 and will hold its first meeting and election of officers some day this week. The incorporators, who also are the directors, are the following physicians: J. E. Waggoner, F. Tice, Lewis H. Bremerman, O. Tydings, Ralph H. Wheeler, M. G. McHugh, G. Frank Lydston, James E. Stubbs, George F. Butler, Adolph Gehrman, Charles C. O'Byrne, Henry F. Lewis and R. R. Duff.

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The purpose of the league as set forth in the charter is in part as follows:

"To procure the establishment of a national bureau of health, divorced from politics; the establishment of a uniform standard of medical requirements in the several states of the union; encouragement and co-operation with all movements and legislation for food reform which shall be fair and impartial and founded on scientific premises; encouragement of political preferment of physicians as tending to secure just representation for the profession; encouragement of measures for the correction of hospital and dispensary abuses of charity."

LEGAL ESSENTIALS TO MEDICAL PRACTICE.—Doctor James A. Egan, secretary of the board, has compiled for the information of the physicians of Illinois an exhaustive summary covering some twenty-five pages of the bulletin, giving the laws and regulations governing the practice of medicine in the States and Territories, revised to date. This will be sent to nearly every physician in Illinois.

An examination of this summary reveals some interesting data. There are now but four States and Territories in which a physician may obtain a license on the presentation of his diploma. These are Alaska, Colorado, Kansas and New Mexico. Kansas, however, licenses under certain conditions.

An examination is required in all other states. The possession of a diploma from an approved college is essential in all but eight, which still admit non-graduates to examination. These are Alabama, Kansas, Massachusetts, Minnesota, Mississippi, Oregon, the Philippines and Tennessee.

Sixteen states omit from their examination that branch, materia medica, which deals with drugs, their sources, preparation and use. It is said that this has been done as a concession to the osteopaths. Illinois, however, is one of the states that continue to examine in this branch.

Fourteen states grant temporary licenses to physicians making application for examination, and twenty-three follow the example set by Illinois several years ago and allow credit in the examination for years of practice of the physicians.

Thirty-three states reciprocate in medical licensure, thus

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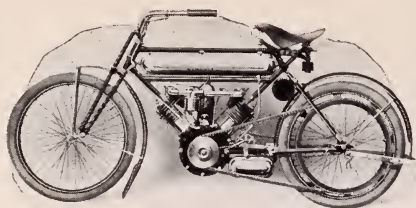
enabling the physician who has passed an examination in one state to become licensed in another.

Itinerant venders of medicine, whose practice comes under the regulation of the Illinois State Board of Health, apparently have a free swing in nearly every state. Only fifteen states besides Illinois have laws governing the practice of these venders. These are Alabama, Arkansas, Delaware, District of Columbia, Iowa, Kansas, Louisiana, Missouri, Nebraska, North Carolina, Oklahoma, Oregon, Tennessee, Washington and West Virginia. Illinois, however, is the only state where itinerant venders of medicine are regulated by the State Medical Board.

The New York Medical Record has considered the summary of such value that it published it in the issue of December 17, 1910.

THE MANAGEMENT OF CONVALESCENCE.—The systematic use of Gray's Glycerine Tonic Comp. following pneumonia, acute bronchitis, La Grippe, typhoid fever, the exanthemata and other acute affections, gives such material aid to the restorative and recuperative processes of the body that the convalescent period is not only greatly shortened, but it is freed from practically all of its danger and uncertainty. Normal physiologic activity of all vital functions is promptly established and with these working in harmony recovery from an acute disease is usually perfect and complete. Gray's Glycerine Tonic Comp. by reason therefore of its proven value as a restorative is probably more often used for promoting convalescence than any other remedy. Its certainty of action, the positive benefits produced, and its freedom from any unpleasant effect, no matter how weakened the patient may be, leave little reason for questioning the preference now so generally shown this dependable remedy. That it serves a purpose in convalescence so far reaching and important, and serves it so well, is all the justification needed for its invariable use just as soon as the fury of a pathologic storm has passed and the reconstructive or convalescent period begins.

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THE
ALIENIST AND NEUROLOGIST

VOL. XXXII.

ST. LOUIS, NOVEMBER, 1911.

No. 4.

OBSERVATIONS ON THE APPEARANCE OF MYELIN
IN SOME OF THE FASCICLES OF THE COLUMNS
OF THE SPINAL CORD.¹

BY DR. ANTONIO BREGLIA.

(Translated from "Annali di Neurologia," Anno X, Fasc. IV.,
V., VI.)

Note by the Editor.—A friend of the Alienist knowing our appreciation of the highly meritorious Italian neurological literature sent us this some time past. We had not place for it then, but it has, since it first originally appeared, lost none of its research merits, hence we place it now in our pages with pleasure.

* * * *

IN describing these few observations I shall begin with the posterior column, since there is much difference of opinion about the appearance of myelin in its fascicles amongst the authors that have made it an object of study. After that, I shall take up the anterior column and finally the lateral one.

POSTERIOR COLUMN.

Flechsig,² in speaking of this column, asserts that the column of Goll myelinizes between the sixth and seventh months of foetal life; whereas Bechterew³ maintains that this

¹ Paper read before the Associazione dei Naturalistic Medici at the meeting Feb. 15 1892.

² Flechsig. De Leitungsbahnen im Gehirn und Rückenmark des Menschen, 1876,

³ Bechterew. Ueber die Bestandtheile der Hinterstränge des Rückenmarks auf Grund der Untersuchung ihrer Entwicklung. Neurolog. Centralblatt, 1885, No. 2.

takes place between the seventh and eighth months, and more recently Popoff⁴ has drawn attention to the fact that in foetuses of nine months the fibers of the external half of that fasciculus, i. e., those next to the column of Burdach, are not yet invested with myelin, whereas those near the septum posterius have a perfectly formed coat of it.

According to Popoff the reason why not all the fibers of the column of Goll myelinize at the same time, but are divided in two groups, is probably to be sought in the double origin of the fibers that form this column.

And, indeed, following Flechsig, he says that part of the fibers spring from the columna vesiccolosa of Clarke or dorsal nucleus of Stilling, which Jakubowitsch⁵ considers a sympathetic column, and which runs from before backward and from without inward and a little upward to meet the internal portion of the column of Goll; whereas the other fibers emerge from the posterior cornua of the gray substance, forming at first an integrant part of the posterior commissure and then going to constitute the external half of the above mentioned fasciculus.

According to Pick⁶ and Musso,⁷ the dorsal nucleus of Stilling, instead of occupying the usual position, i. e., the median aspect of the neck of the posterior cornu, may be found nearer the one of the other side, and situated in the posterior commissure behind the central canal.

Anyhow, the various authors that have studied this nucleus make three sets of fibers spring from it, viz.:

1. Fibers that form this nucleus of Stilling go to form the central part of the column of Goll.

2. Fibers that go transversely outward, the so-called

4 Popoff. *Recherches sur la structure des cordons posterieurs de la moelle epiniere de l'homme*. Archives de Neurologie. Revue des maladies nerveuses et mentales, publiée sous la direction de T. M. Charcot. Paris, 1889. Tom. XVII.

5 Quoted by Debierre in his *Traite elementaire d'anatomie de l'homme*. Paris, 1880.

6 Pick. *Ueber eine abnorme Lagerung der Clarke'schen Saulen, etc.* Archiv. fur Psych. VII.

7 Musso, G. *Un secondo caso di anomala conformazione della colonna vescicolare del Clarke*. Rivista sperimentale di freniatria e di medicina legale. Vol. XIII, fasc. I, 1887.

horizontal cerebellar fibers of Pick, that go to form the column of Flechsig.

3. In the last place the fibers to the great sympathetic (Jakubowitsch.)

Besides, Flechsig himself has noticed another fact, viz., that the column of Goll, in contradiction to the general belief, does not terminate in the dorsal portion of the spinal cord corresponding to the second dorsal vertebra, but descends farther, as far as the lumbar portion of the cord. This arrangement that I also have been able to find in the foetuses of nine months, can plainly be demonstrated with my tincture of haematoxylon stain, and it is seen exactly as the author has described it, the continuation of the fasciculus appearing unstained on account of the absence of myelin and presenting the appearance of a bi-convex lens (centrum ovale of Flechsig) whose two halves are found on either side of the septum posterius, occupying the middle third or a little more.

Now it seems to me that the explanation why those fibers not yet invested with myelin are considered as belonging to the column of Goll, although they are found in the continuation of its middle fibers, which, a little higher up are already myelinated, may be the following:

The dorsal nucleus of Stilling, from which the internal and already myelinated fibers of the column of Goll are derived, according to all anatomists with the exception of Schröder Van der Kolk, cannot be followed through the whole lumbar swelling, but stops about the twelfth dorsal nerve, or at the utmost, disappears between the second and third lumbar nerves. This is why the fibers of that lenticular fasciculus situated there, which spring from the posterior cornua, which for their part, run through the whole cord, have not yet got their investment of myelin, like those others, that higher up form the external non-myelinated part, and this is why they strike the eye by their lighter coloration.

In other words, the fibers of this lentiform fasciculus, that have a larger course, since they spring from the posterior cornua, occupy the median line, forming the centrum ovale of Flechsig, until they arrive at the level of the other fibers, which spring from the dorsal nucleus of Stilling, and to which

they immediately give way, placing themselves laterally; but they are distinguished from them by their late myelinization.

Bechterew, quoted by Popoff, had made since 1885 a similar observation with reference to the column of Burdach in foetuses of five to six months and according to him the fibers assume the coat of myelin in two times, viz.: first, those of the external half (those nearest the posterior cornu as far as the commissure), and then the internal ones (those nearest to the column of Goll.)

Mingazzini⁸, however, quotes Bechterew and says that this author has demonstrated that the fundamental fascicle of the posterior column in its posterior portion, i. e., between the columns of Goll and the point of entrance of the posterior roots, myelinizes later than in its anterior portion, whereas from the figure that he has taken from Bechterew, it appears that this author says the contrary.

This difference is certainly due to a typographical error.

Furthermore Popoff asserts that the column of Goll, in foetuses at the beginning of the seventh month, is still without myelin, and when the antero-external portion of the column of Burdach contained fibers with a well developed coat of myelin, the posterior peripheric fascicles, next to the columns of Goll, showed a thin covering only of myelin.

From the observations of the two above mentioned authors two hypotheses appear to be possible, viz.:

1. Either we have to admit that a demyelination of the column of Burdach takes place, if not a complete one certainly a partial one. This seems to be admissible, since according to Bechterew, between the fifth and sixth months of foetal life the whole external part, bordering on the internal limit of the posterior cornua, is seen to be myelinized; whereas according to Popoff at the beginning of the seventh month, the antero-external portion has its myelin distinctly developed, while the postero-peripheric portion only shows a thin and delicate layer.

2. Or on the other hand, we have to suppose that the fibers that are seen myelinized between the fifth and sixth

⁸ Mingazzini, G. *Manuale di Anatomia degli organi nervosi centrali dell'uomo* Roma, 1889.

are joined by others, springing from different parts, in which the myelin appears later.

Of these two hypotheses the second one appears to be the more acceptable since the increase in thickness of the spinal cord must in part depend on the increase of the diameter of the nerve fibers (not taking into account the gray substance), in part on the numerical increase of these fibers.

Anyhow, my own observations not having led me to results perfectly identical to those mentioned, I intend to give a short account only of what I have been able to see.

In horizontal sections of the crural swelling of foetuses of nine months, I have been able to satisfy myself that the internal fibers of the column of Burdach are completely supplied with myelin, whereas those of the external half, the anterior ones, i. e., those next to the commissure, are alone myelinated; all the others, which seen as a whole, usually appear like a triangle with a posterior base, still being devoid of myelin. This unstained triangular fascicle appears so perfectly marked off as if we had to deal with the spinal cord of an adult with the most classic degeneration, characterized by the loss of the patellar reflex, and goes by the name of fascicle of Westphal,⁹ which is limited internally by a line parallel to the septum posterius, drawn from the point where the internal margin of the posterior cornu projects farthest into the posterior cord; externally by that portion of the same posterior cornu that extends backward and a little outward, and behind by the periphery of the cord itself. (It must, however, be mentioned, that this triangular form does not always present itself so sharply outlined in all respects.)

Furthermore, the posterior and external angle of this same fascicle is continuous with another small portion of the medullary mantle, likewise non-myelinated, which is called Lissaner's zona marginale of the posterior cornu,¹⁰ or pons

⁹ Westphal, Berl. Wochenschrift, 1881, No. 1, Archiv. fur Psychiatrie, Bd. V. Heft 3, XV, Heft 3, XVI, Heft 2 u. 3, XVII, Heft 2, XVIII, Heft 2 u. 3; Erb. Arch. f. Psychiatrie, Bd. V, Heft 3; Krause, Neurolo. Centralblatt, 1886, No. 28; Minor, Neurolog. Centralblatt, 1887, No. 10, Fornario, Bollettino della R. Acc. Med. Chir. di Napoli, 1888. Also Dotto in Palermo and Sanna Salaris in Turin have published two interesting monographs on the same subject, etc.

¹⁰ Lissaner, Beitrag zum Faserverlauf im Hinterhorn des menschlichen Rückenmarks und zum Verhalten desselben bis Tabes dorsalis." Arch. f. Psych. XVII, 376, 438, tab. III, 1886.

medullaris of Valdeyer, and of which we shall have to speak later on.

In the cervico-thoracic swelling, immediately behind the posterior roots, I have been able to notice another small fascicle of fibers which remains colorless, being likewise free of myelin and which might be called the fascicle for reflex movements of the exterior triceps brachii (if the anatomo-clinical observation confirms this supposition), like that of Westphal is for the quadriceps exterior cruris.

This fascicle, to which I draw the attention, is very delicate and also triangular and is separated from the postero-internal periphery of the crossed pyramidal tract by the passage of the posterior roots, or by the posterior collateral sulcus, or by both; but in some sections the roots as well as the sulcus may be wanting, and then those two fascicles, viz., the one pointed out by me and the crossed pyramidal fasciculus would run into one another without any line of demarcation, were it not for the small zone of Lissaner.

In the last place we have to consider as annexes of the posterior columns also Clarke's and Kölliker's white longitudinal fascicles of the gray matter or dolorific fascicles of Huguenin,¹¹ that are placed between the posterior cornu and the substantia gelatinosa of Rolando.

They are already myelinated, but they do not gradually increase in bulk as we follow them upward, which should be the case if they really were fascicles of long course; they rather show a varying volume in different parts of the cord. This fact seems to prove that we have to take them for short fascicles, and for this reason not to consider them as dolorific tracts; also because, according to Woroschiloff's experiments on animals, the painful sensations, at least in these, are transmitted by the lateral columns; for which reason the column of Gowers rather seems to deserve that name.

ANTERIOR COLUMN.

In this column the myelin first appears in the anterior fundamental fascicle or anterior root zone of Pierret, and after

¹¹ Huguenin, G., *Anatomie des centres nerveux*. Translated by Th. Keller and annotated by M. Duval. Paris, 1879.

birth in the fascicle of Turk, or direct pyramidal fascicle of Flechsig, or anterior pyramidal fascicle.

But the fascicle of Turk as well as the crossed pyramidal tract of the lateral column do not always behave in the same manner, and having found in a foetus of nine months the third of the types laid down by Flechsig, I think it worth while to give a short account of it.

It is known that the pyramidal fascicles of the spinal cord are the prolongation of the pyramids of the bulb.

Now the first type that is met with most frequently is present if every pyramid divides itself as usually into two fascicles, one of which (the smallest) is formed by about one-tenth of the fibers and descends in the anterior cord of its own side as fascicle of Turk; whereas the other nine tenths of the fibers intersect with those of the opposite side and go to form the crossed pyramidal fascicle of the other side.

(In this way the semi-decussation takes place that is ordinarily called the crossing of the pyramids of Mistichelli.)

At other times the above disposition may be inverted, nine-tenths of the fibers forming the fascicle of Turk and only the one-tenth decussating, whence the possibility of paralysis on the side of a lesion, and the greater or lesser length of the fascicle of Turk.

The second type is found in 11% and is much simpler than the preceding one, the fascicles of Turk being absent, and a total decussation of the pyramids taking place.

The third type which is found in 10% is also called the asymmetrical type of Charcot. It is present if one pyramid divides into the usual two fascicles, whereas the other crosses over as a whole, this causing the asymmetry, a condition that must be known to him who wants to avoid errors by considering it as pathological.

In the case observed by me the fascicle of Turk is present on one side only, and the spinal cord is distinctly asymmetrical; but it is remarkable that in some sections that half of the cord where the fascicle of Turk is present, is more voluminous than the other, where it is wanting, whereas in other sections the opposite is the case.

LATERAL COLUMN.

Each lateral column shows the myelinization of the fascicles composing it in a different manner, according to whether we examine a cervico-dorsal or a dorso-lumbar section.

In the former we find myelinated the fascicle of Gowers¹² the fascicle of Flechsig and the fundamental fascicle of the lateral column; whereas the crossed pyramidal fascicle and partially the limited lateral zone of the gray substance are devoid of myelin.

In the dorso-lumbar section and before all inferiorly, the pyramidal fascicle, which higher up is all covered by the direct cerebellar tract (except behind) is uncovered by myelin, as is the greater part of the marginal zone of the gray substance, with which it unites, whereas in the lumbar section the pyramidal fascicle has become peripheral and continues to be devoid of myelin, the marginal zone, on the other hand, having received its coat of myelin and being much thicker.

Besides all these fibers with a longitudinal course there are in the spinal cord oblique ones, amongst which is most prominent the white or anterior commissure, whose fibers are already myelinated.

According to Bignami and Guarnieri¹³ this anterior commissure would arise by an interlacing of the fibers of the fascicle of Gowers, since these authors, having studied the spinal cord of an individual who had had a thigh amputated eleven years before his death, found the fascicle of Goll atrophied on one side and the fascicle of Gowers on the other side, and their view is also supported by the fact that in foetuses of seven to eight months the fascicle of Gowers is already myelinated, and with it also the anterior white commissure.

It is supposed by some that the fibers of the fascicle of Turk decussate in the anterior white commissure in order to reach the gray substance of the opposite side, and to enter into relation with the nerve-fibers of the muscles of the arm, or

12 Gowers W. N., Bemerkungen über die antero-laterale aufsteigende Degeneration im Rückenmark, *Neurol. Centralbl.*, 1886, No. 5.—Id., Weitere Bemerkungen über den aufsteigenden antero-lateralen Strang. *Neurol. Centralbl.* 1886, No. 7.—Id., *Manual of the Nervous System*. Vol. I, page 122.

13 Bignami, A., and Guarnieri, G., Ricerche sui centri nervosi di un amputato. *Bollettino della R. Accademia medica di Roma*. Anno XIV, 1887-88. Fasc. VI.

according to others, of the muscles of the neck and trunk; but from the above given facts it is apparent that, if these fibers really were decussating in the anterior commissure, this one should be devoid of myelin, as the fascicle of Turk is, and instead of this the contrary is true.

Huguenin supposes also a posterior white commissure, especially in the brachial and crural swellings. However, it appears to me that it should be admitted also for the rest of the cord, since, although it be very slender, the existence of myelinated fibers that cling to the posterior border of the gray commissure cannot be denied. These fibers may be more or less numerous, according to the different sections of the cord, but it is beyond doubt that they always exist in the adult, and for the whole length of the medulla.

Now in foetuses of nine months they are entirely absent, even in the above named swellings, where in the adult the myelinated fibers of the posterior white commissure form a layer that cannot be overlooked, and since, according to Flechsig, the fibers of the posterior cornua that go to form that part of the column of Goll that myelinizes later, and which continue as far as the lumbar cord as oval centre of Flechsig, go to form an integral part of the gray commissure, it appears to me that it is they that go to constitute Huguenin's commissure. And in fact, this commissure in the foetuses mentioned, has not got the fibers myelinated like those of the external portion of the fascicle of Goll, but after birth they all acquire the myelin contemporaneously.

(Schroeder Van der Kolk supposed that the ascending prolongations of the cells of the posterior cornua interlaced along the whole cord, and that those of the left side passed to the right, almost immediately after their origin and vice versa.)

Finally there are left the nerve roots, which, according to Flechsig, myelinate first of all, but it must be remarked that if this is true for that part of them that is included in the medulla, it cannot be said of the other part, that stays outside since in some sections of the medulla they are myelinated, in others, however, either some single fibers only have their visible layer of myelin, or they are completely free of it, or

scarcely have a most delicate layer that can be discovered only under a very high power.

This is a common belief that the fibers of the posterior roots escape **by** the posterior collateral sulcus. This assertion does not seem to agree with the facts, the posterior roots not passing out entirely through the posterior collateral sulcus, some of them traversing the median border of that sulcus and the course stands out very distinctly if we examine microscopically sections of the swellings that are stained either according to Weigert's method, or later by my tincture of haematoxylon method, which I prefer on account of the greater stability of the coloration.

From my observations I have satisfied myself that in front of the posterior roots there is, ordinarily, found the posterior collateral sulcus, which exactly separates the posterior from the lateral column, and no root fiber is ever seen crossing it. In some sections, however, it may be seen that the border by which the roots pass, is almost separated from the posterior and joined to the lateral column by another sulcus, which may mislead one on superficial observation. This, however, will not be the case if we examine with a little attention; we shall have to convince ourselves that this sulcus is determined either by the passage of a blood vessel—which in some cases may be seen full of blood globules—or by the connective tissue that accompanies it.

In other cases it may happen that besides this sulcus there is also the collateral posterior sulcus, which also may be just indicated, or may be wanting, as f. i. above and below the exit of the roots, i. e., where the segments of the cord unite, and in such a case the border of the column stands for the two sulci, almost isolated for a certain distance, with all the radicles arranged like a pencil which then divides, according to Kolliver, into an external and an internal fascicle, the latter of which is also called the radiating fibers of Frohmann.

This whole disposition of the sulci is easily made out, especially in the brachial swelling.

Furthermore, the sulci may both be absent, and then Tissaner's marginal zone of the posterior cornu is well marked,

studied by him in the lumbar section and described in the following manner:

"There is found between the edge of the substantia gelatinosa and the periphery of the spinal cord a layer of varying thickness. In horizontal sections this may easily be made out and forms a kind of bridge between the posterior and lateral columns.

"In fact, in haematoxylin preparations this spot, on account of its homologous formation of closely packed and vertical nerve tubules, offers an aspect resembling that of the white substance and passes over into it on either side without being separated by a special septum, yet this district is distinct from the surrounding white substance containing their nerve-fibers exclusively. The posterior radicular fascicles traverse the little peripheral spot near its internal border."

In the lumbar section this zone is much more developed than in the other regions, and it is rare, but not exceptional, that that sulcus, or a trace of it is found, by which the posterior radicles seem to escape from the lateral column, yet the presence of the posterior collateral sulcus does not present any difficulty; it may only be indicated, or it may be deepened so as not to make apparent the continuation between posterior and lateral column, or the sulcus may be replaced by a septum that behaves like the sulcus, and so it seems that this disposition contradicts Tissaner's assertion, who denies all division between the said parts.

In the medullas of foetuses of nine months also the gray substance requires attention, in which that dense network of myelinated fibers that is found in adults is either not seen at all or only very little.

In fact, in some sections of foetal cords only few fibers are seen springing from the roots of the nerves, which soon lose their myelin¹⁴ and remain confused to the aspect, with the gray substance, or, even if they are a little more numerous, they always are very scanty in comparison to those seen in adults.

¹⁴ Edinger has described very fine nerve-fibrils that are found in the whole series of vertebrates, and coarser fibers in the invertebrates that behave with Eligert's, and therefore also with my haematoxylin method, like medullated fibers without an investment of myelin. This proves that it is not only the myelin in the strict sense of the word that is stained black.

I cannot withhold another observation that I have made on the same spinal cord of a nine months foetus that presents the asymmetrical type of Charcot and which I shall describe briefly.

The *filum terminale internum*, examined with the naked eye, presented, most so toward its extremity, swellings and constrictions, that seemed to be caused by the lack of care in extracting the cord, those inequalities appearing as if they had been produced by compression with the forceps or something else.

But I had to change my mind after microscopical examination of the sections, the results of which were the following:

1. The asymmetry of the cord continues in the *filum terminale*, it is even much more marked so that the half that corresponds to the side where above the fascicle of Turk is found, appears much more voluminous than the other and where it is wanting.

2. The *fissura longitudinalis antica* is very deep and may be compared to a capital L whose long limb is sagittal and is flanked by longitudinal myelinated fibers, which are more numerous on the more voluminous side. These vertical fibers are crossed in their course by horizontal fibers that seem to be radicular, at least as far as we can judge from their way of behaving; whereas those of the other less voluminous side are little numerous and form a delicate layer.

This layer thins out more and more if we follow it from behind, forward and stops at the fissure, whereas that of the other side passes also to the anterior column and extends a little to the lateral one.

The short limb of the fissure deepens transversely on the bigger side, and behind it the anterior commissural fibers are not seen.

3. The *scissura longitudinalis posterior* with the *septum posterius* is much shorter than the anterior one, and is flanked by the myelinated fibers representing the posterior columns. It deviates to the right towards the bigger half, corresponding to the single fascicle of Turk above. The already myelinated fibers of these cords extend in a thin layer, which in the more voluminous half, go so near the fibers of the anterior column

without joining them. Those of the other side extend but little, and the whole periphery of the gray substance remains uncovered.

4. The gray commissure is displaced towards the more voluminous side, and the central canal is absent, it is found, near the peripheric part of the smaller half. This fact is inferred from the presence there of a rent that is surrounded by layers of epithetical elements, as I have been able to state by using other staining methods, as Stohr's haematoxylin, safranin, etc.

5. The gray substance is divided very unevenly, and whereas on the voluminous side a posterior cornu is distinguished, and an anterior one with voluminous ganglionic cells, the smaller half only shows very deformed gray substance without nerve-cells.

6. Finally, in those cuts where the *filum terminale* is very slender there is such a chaos in the disposition of its elements that it is difficult to give a correct description of it.

Since I have not succeeded so far to find another similar arrangement in the *filum terminale*, I am unable to say if it is a consequence of the asymmetry of the cord produced by the absence of one of the fascicles of Turk, or an altogether independent anomaly.

Now, if we intend to give a short resumé of what the different authors have said about the subdivision of the columns of the cord into the different fascicles, which for their part show a differentiation as to length, myelinization and degeneration, the following is what may be stated generally.

As to the fascicles composing the single columns we have this:

A. The anterior column is made

1. Of the fascicle of Turk, or anterior pyramidal of Flechsig.

2. Of the fundamental fascicle of the anterior column or anterior root-zone of Pierret.

B. The lateral column comprises:

1. The fascicle of Gowers, or ascendant antero-lateral fascicle, or lateral part of the rest of the lateral cord of Bechterew, that also invades part of the anterior fundamental fascicle.

2. The fascicle of Flechsig or of Foville, or direct cerebellar fascicle.

3. The crossed pyramidal fascicles or lateral pyramidal or pyramido-lateral.

4. The fundamental fascicle of the lateral column, or mixed anterior zone of the lateral column, or lateral principal or fundamental fascicle.

5. The lateral emitant zone of the gray substance, or deep lateral fascicle or fasciculus emitrophus.

(Some authors, taking away the fascicle of Flechsig and the crossed pyramidal fascicle, call the remaining portion the rest of the lateral column, including in this name also the fascicle of Gowers, which not all do.)

6. The respiratory fascicle of Krause, that consists of a few fibers, and is found in the lateral part of the base of the posterior cornu, but only in the upper cervical section.

C. The posterior column embraces:

1. The fascicle of Goll or of Gratiolet (*funiculus gracilis*).

2. The cuneiform fascicle or fascicle of Burdach, or posterior radicular fascicle of Pierret (*funiculus cuneatus*).

3. In the lumbar region of the fascicle of Burdach there is the fascicle of Westphal.

4. In the cervico-dorsal region the other fascicle mentioned by me, to which I shall give the name of fascicle for the reflex movements of the triceps extensor of the forearm.

5. Lissaner's marginal zone of the posterior cornu, or pons medullaris of Waldeyer, that is also found in the lumbar section where it is more developed than elsewhere.

6. The centrum ovale of Flechsig that belongs to the lumbar region only, and is comprised between the median aspects of the columns of Burdach.

7. Clarke's and Kölliker's white longitudinal fascicles of the gray substance, or dolorific fascicles of Huguenin.

Besides these fascicles with a longitudinal course there are others in the spinal cord with a more or less oblique course, as the anterior and posterior roots and the radicular fascicles of the accessory nerve of Willis, which are only found in the upper cervical portion; the fibers of the anterior white commissure, amongst which I have, however, seen longitudinal

fibers; those of the posterior white commissure of Huguenin, also the horizontal cerebellar fibers of Pick and the two bundles of Pal,¹⁵ of which one is placed at the point where the lumbar cord passes into the dorsal cord and runs from the posterior cornu to the anterior column in which it descends. The other bundle has been seen by the author in several sections about the location of the cervical swelling. This bundle arises at the tip of the lateral cornu, traverses the lateral group of the ganglionic cells, and running in a straight line, without evidently giving any fibers to the anterior or posterior commissure, it extends as far as the level of the latter, where it seems to bend. It is composed of fibers of medium size, which are very compact and about $\frac{1}{2}$ mm. thick.

Concerning the various fascicles of the spinal cord, considered with regard to their length, let us observe the following:

1. The fascicle of Turk usually descends as far as the middle portion of the dorsal medulla, but it may stop at the brachial enlargement, or on the other hand, extend down to the crural swelling.

2. The crossed pyramidal fascicle runs through the whole cord, down to the second or third sacral nerve.

3. The fascicle of Gowers has been followed up as far as the inferior portion of the lumbar section.

4. The fascicle of Flechsig reaches as far as the last dorsal nerve.

5. The fascicle of Goll goes to the middle part of the dorsal cord, and according to Flechsig, to the lumbar swelling, as I too have been able to state in foetuses of nine months.

6. All the other longitudinal fascicles have a more or less short course and then terminate suddenly.

Since not all the different fascicles of the spinal medulla reach to its inferior extremity, it is evident that if they are all present in the cervico-dorsal section (with the exception of the fascicle of Westphal, which is represented by that fascicle to which I believe the reflexes of the extensor triceps brachii might be attributed), in the dorso-lumbar section there is absent the fascicle of Turk and the one of Flechsig, and of the

¹⁵ Pal, T., Ueber zwei gesonderte Nervenbündel in der grauen Axe des menschlichen Rückenmarkes. *Medizinische Jahrbücher*, 1887.

fascicle of Goll only a residual portion is found as the centrum ovale of Flechsig.¹⁶

Finally, with reference to the process of myelinization and degeneration, it may be said in general that it proceeds according to the direction of the conducting and functional power of the nerves, so that it will be in descending direction (distal), i. e., from the brain to the spinal cord by the motor fibers (centrifugal paths) as for the fascicle of Turk, the crossed pyramidal fascicle, the fundamental fascicle of the anterior column, and (in part) for the fundamental fascicle of the lateral column and for the fasciculus limitrophus in ascending direction (cerebral) for the sensitive fibers (centripetal paths), as for the fascicle of Gowers, that one of Flechsig,¹⁷ for the fascicles of Goll and Burdach, as well as for the fascicles of Westphal, Huguenin, Lissauer, and for the bundle pointed out by me in the cervico-dorsal section.

From the above given facts it will easily be understood that the division of the medullary mantle into an antero-lateral or motor column and a posterior or sensory column is not quite exact, for although the latter name may pass, the one for the antero-lateral division would be entirely erroneous; it is not even applicable for the anterior column alone, since, besides the fascicle of Turk and the anterior radicular fascicle, which are purely motor, there are those fibers of the fascicle

16 Bloeq, (a) in a lecture on Lesions et nature du tabis dorsalis, constructs a diagram reproduced in Fig. XI, in which, although it gives the names of the various fascicles very exact, he does not seem to be very correct in stating their limits of extent; in fact, from what has been said above about the arrangement of the fascicles of the medullary mantle, it is clearly seen that the fascicle of Westphal is misplaced, the zone of Lissauer is much enlarged at the expense of the preceding fascicle, most so in the cervical section where it has a medium extension in comparison to the lumbar and dorsal sections, and lastly (unless it be for the sake of didactic convenience) also the centrum ovale of Flechsig is misplaced, which is found in the lumbar section exclusively, whereas this figure represents a section through the cervical part of the cord.

The explanation of these differences in establishing the topography of the various fascicles of the medulla seems to be that the author has followed the arrangement of Pierret (b) and Charcot (c), to which he has added the new fascicles without, however, taking into account their limits.

(a) Gazette Hebdomadaire de Medicine et de Chirurgie, March 26th and April 2nd, 1892.

(b) Pierret, Archives de Physiologie, 1872.

(c) Charcot, Lezioni sulle malattie del sistema nervosa, raccolte da Bourneville e tradotte dal dott. v. Meyer, Napoli, 1883.

17 According to Marchi, V. (d) the fascicle of Flechsig is in all probability formed by afferent and efferent fibers, of which the latter would be those that degenerate (at least in dogs and apes) in consequence of lesions of the cerebellum.

(d) Sull'origine e decorso dei peduncoli cerebellari e mi loro rapporti cogli altri centri nervosi. Rivista sperimentale di Freniatria e di Medicina legale. Vol. XIII, f. III.

of Gowers which cover it and which are sensory and therefore it is mixed as well as the lateral column.

The order, then, in which the various fascicles of fibers develop their covering of myelin is the following:

The first fibers to myelinize are those of the anterior and posterior nerve-roots, according to Flechsig, and after these those of the anterior, lateral and posterior fundamental fascicles. But to me it seems that of the roots, that part first myelinizes which is in the depth of the cord, and afterwards the more external part.

Between the 7th and 8th month of foetal life the myelin appears in the fibers of the fasciculus limitrophus, the fasciculus of Gowers and that of Flechsig.

Between the 6th and 7th month (Flechsig) and between the 7th and 8th month (Bechterew) the myelin forms in the fascicle of Goll, about which, however, the observation of Popoff must be remembered, viz., that the median portion first myelinizes and afterwards the lateral one.

After birth finally the myelinization begins in the pyramidal fascicles of the medulla, which are already provided with myelin in the cerebrum and mesencephalon, and at this period also all those fibrils acquire their myelin that form the reticulum of the gray substance.

As an appendix I shall give in outline what I have observed in the spinal cord of a little girl 34 days old.

A. The fascicle of Turk appears perfectly myelinated, except at a few points; whereas in the crossed pyramidal fascicle the appearance of myelin scarcely begins.

B. Where the dorsal nuclei of Stilling are most voluminous it is seen that the crossed pyramidal fascicles appear to become bigger, invading the lateral limitant zone, projecting forward in the lateral fundamental fascicle as far as the anterior part of the fascicle of Gowers proper, at the point where this one passes over the anterior cord; whereas farther down in the cornu medullaris the lateral limitant zone is much better outlined.

C. The fascicle of Goll is also entirely provided with myelin and in the lumbar section the oval centre of Flechsig is no longer seen, and there are seen not few fibrils that form

the posterior white commissure, which, I think, supports my opinion with regard to their origin and course behind the gray commissure.

D. Finally, the reticulum of the fibrils of the gray substance is very distinct and the nerve roots are completely myelinated, also in their external portion.

THE CAREER OF A MORAL IMBECILE.

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THERE seems to be no subject in the realms of science—sociologic or medical—so little understood and so often misunderstood as that of moral imbecility in its many aspects.

This story presents a phase of degeneracy of the Idiot Savant order. One who, in the prosecution of his so-called profession, entertaining to his fellows and, so far as is known, seemingly harmless save to himself, is yet a menace little dreamed of to society. What the slightest deviation in any direction might not have made him, can hardly be estimated, for there is certainly basic material sufficient to swell the annals of vice, crime, exaggerated sexuality and dire heredity, once concentrated in any one channel. The case presented is the more singular since it is of one who himself recognizes what the world at large does not—that he is not normal—and he laughs long and loud at that world which accepts him as such, as expressed in his own characteristic fashion: “I am amused, sometimes very often, when I hear admiration of me, and when people don’t know what I am, that I lived in an institution for feeble-minded once. I laugh and laugh and laugh to myself.”

It was a dull, lowering day in January, 1895, when I first saw the little sulky, grim-faced boy brought to me by his father, with a history of untruthfulness, vulgarity, profanity and utter incorrigibility. A confirmed masturbator, a sexual pervert and a persistent runaway, he had, however, an affectionate disposition—all of which subsequent acquaintance verified.

There we three sat: The father a stout, good-natured German with care written on his face and nervousness and anxiety expressed in every movement. The boy with sullen brow, nervously kicking his feet to and fro, as his father tearfully related his short-comings; his face growing darker, and his frown deeper, while looking at me defiantly with hard unblinking eyes and stern unsmiling lips.

Altogether the atmosphere within was equalled only by the drip, drip, drip of the rain outside obscuring even the leaden January sky.

The conference was short and might be yet more briefly summarized as having an impossible aim. In point of fact the father had brought me a spiritual nonentity, requesting that I replace what had never been placed; that I remake this series of contradictions into what had never originally been formed—a perfectly normal boy.

The family history showed the parents healthy, hard-working people, both born in Germany; the boy in Pennsylvania. The father a miner by trade was unusually intelligent for his class. Heredity fair: the paternal grandfather died at the age of 41 of pulmonary tuberculosis; the maternal grandmother at 53 of "kidney and heart trouble."

Of eight children all born at full term and well-nourished by mother, one died of marasmus aged two months; Albert was the fourth, the father being then 38 and the mother 32 years of age. A strong babe, his infancy shows extreme nervousness. He walked at nine months, at which age he had also one convulsion, and only one.

The minutes of his examination upon admission show: Age 14; height, 5 ft. 3¼ inches; weight 117½ pounds; head well formed; palate normal; teeth irregular—a few decayed; heart action and reflexes good; sight and hearing normal; a slight hesitancy in speech. Speaks readily English, German and also "Romany." Memory good, as is also recognition of form, color and number values. Powers of attention and imitation fair. Can write and reads the daily paper intelligently. Nervous and active, he accomplishes simple house service—can make beds, sweep and wash dishes. Table

habits untidy. Is disobedient, untruthful, untrustworthy, profane and vulgar, especially to women in whose company he finds no pleasure, but delights in talking in the most filthy manner to men in their presence. In quarreling with the boys he shows cowardice by invariably selecting a smaller one, on whom to vent his anger. A glance at some of his quarterly records shows the gradual effect of discipline and training.

"February 1st, 1895:" This boy developing an ugly temper, has several times threatened the matron, and when she started to take him to the "Quiet," suddenly scratched both sides of his face and also pulled a bunch of hair from his head, threatening to kill himself. Placed in the "Quiet" for several hours and kept under constant surveillance he did not injure himself, and has improved very much in demeanor since this discipline.

May, 1895: Manners and habits of profanity very much improved. Assigned to carpenter shop; assists very willingly in general repair work.

August, 1895: Continued improvement, but ample space for more. Has been transferred as an aid temporarily to another building. Doing well and seems happy.

November, 1895: Retransferred to carpenter shop. Accepts work quite willingly; likes to use hammer and saw.

Improved considerably in language, and in some other ways. Is steadily progressing in military drill. Although at first stubborn, nervous and awkward, he has yet taken very kindly to the system, and by hard work has attained the rank of captain. Is now erect, alert and active, knows the proper position of arms and shoulders, the use of the limbs in motion and repose and has acquired a free, graceful carriage. Dominated by perverted sexuality, he is a constant menace to smaller boys.

February, 1896: An excitable boy, vicious, careless and of limited capacity he has made but little headway in work. Fond of dime novels, smoking and chewing, when opportunity offers. With no sense of deference to elders he will even talk of parents in the most disrespectful manner. Has made considerable headway in curbing foul language, and

though his morals leave much to be desired, he is on the whole improving.

May, 1896: Transferred to Custodial Building, at hard labor for one week, for extreme disobedience and impudence to teacher. Returned improved.

August, 1896: Albert has improved mentally and also in self control and general bearing. Is janitor and a good helper in carpenter shop in handling materials, etc., but is not skillful in the use of tools. Does many things without judgment or forethought. Thus, one day he sat on the limb of a tree, while sawing it close to the trunk, and was much surprised upon the limb falling that he should fall too. Delights in sensationalism, expecting one to believe the most extravagant lies. For instance, upon returning from a visit home, he gave a graphic account, going into the most minute details, of the deaths of three infants, daughters of his eldest brother. How they had died of some mysterious disease which every precaution was taken to conceal; how they were wrapped in cotton batting saturated with some powerful disinfectant and buried at midnight, and how the entire house for days was hung with sheets saturated with the same disinfectant. We, of course, much alarmed, isolated him, while awaiting definite information from his father. Meanwhile A., learning that there was an excursion for his club on the *tapis*, and fearing he would miss it, retracted his story *in toto*. Nevertheless he was kept in seclusion until his father wrote that the only truth in the story, as A. very well knew, was that his brother's wife had had an abortion; adding in the fullness of his grief, "God forgive me for having such a liar for a son!" Upon hearing this Albert coolly admitted the truth of his father's statement, saying that he had only wished to "stir up things."

This is but one of hundreds of his stories, and indeed he was never so happy as when he could "stir up." The truth simply is not in him and to quote from Kipling, "There is too much ego in his cosmos." A veritable artist at diatribe, he will stand and argue by the hour, provided he can find a "sparring partner."

When rebuked for anything his unfailing reply is: "I'm only a gypsy. I can't help it. I'm feeble-minded."

These gleanings from the records of several years, show typical degeneracy; mentality of poor quality, often distorted by exaggerated emotions, and the nervous temperament with no moral balance to induce equilibrium. For him, therefore the absolute necessity was the regular life, with its persistent alterations of work and recreation, exercise and rest; work offering the stimulus of ready accomplishment and healthful amusements that give diversion without over-stimulation.

Under the protecting, compelling hand, he was finding his niche, a life without injury to himself or to others; his physical condition during this period of his sojourn at Elwyn, excepting a few minor sicknesses, being fairly good. Within four years after coming under my care, he eloped and for some time wandered about the country, among the farmers, telling the most specious and plausible stories. Would make a pleasing impression, hold a job for a little while, until found out and then be turned off.

Then a tramp, sleeping in barns and under hay-stacks, he led a roaming life for almost two years, when he cast his lot with a tribe of gypsies, as a letter to one of our employes tells, thus:

Riverside, New Jersey, October, 30, 1901.

Dear Friend Charls:—It takes me great pleasure of writing you a few lines Hopping this letter will find you in the best of health and spirits, as it is leaving me at the present time my dear Friend Charls. I am atravling with the Gipsies again.

Would you please be ever so kind to look and see if you could get them books with the words of that Gipsie play you had at school when I was there. Me and my tribe would like to have the words of it if you please. We have 41 wagons and 40 tents and 150 horses we are going down south this winter.

How are all the folks getting along. I would enjoy anice letter from you very much, I am going to send you a nice presnt for Christmass.

Please send those words of that play as soon asposble.

Adress as above. * Your loving friend Albert.

After a hiatus of some eight years, he suddenly appeared one afternoon at the institution.

Neatly dressed and well-groomed, he had developed into a nice looking fellow of some 28 years of age.

He said he was making a good living, drawing a salary of \$35.00 per week, traveling on vaudeville circuits, and exhibiting at cheap museums as a sword-swallower, glass-eater and snake-charmer.

He explained that he had been an assistant at one time to a magician, and learning his tricks, finally launched out independently. The practice of his "profession," however, had not abated his vulgarity, for he exhibited unblushingly a pocket full of the most obscene literature. He told much that was true, but so interlarded with lies that it was hard to discriminate, although when some of his statements were questioned, he frankly confessed.

Telling of his daily life, he said: "When night time comes I am all in, so that I make for bed. There I lay thinking until I fall asleep. Then breakfast, then take to the tent to face all day and evening the large curious crowds, and to tell them some famous lies that the devil could not help from believing."

Vain and bombastic, his cosmos still retained the ego, as the following advertisements forcibly illustrate.

STAR PALACE.
DEATH DEFIED TO-NIGHT.



"YELLO: THE CHAMPION SWORD SWALLOWER OF THE WORLD."

YELLO

The man who laughs at death, the man who has been given but five years to live by the world's greatest experts. See the act that is pronounced by critics to be the most sensational act ever presented to the public.

See YELLO, the Most Expensive Act Ever.

YELLO Is the Champion Sword Swallower of the World.

Any person wishing to see his beautiful belt which was presented to him by R. K. F. of the P. G. can do so upon request.

When you see Yello on the street, speak to him, call him YELLO, and if you are among the FIRST TEN you'll receive a FREE TICKET.

PRINCESS THEATRE.

DON'T LET ANYTHING STOP YOU!

READ AND WONDER.

We take great pleasure in informing the public that we have engaged at an enormous expense, the most wonderful man living—the marvel of the 20th century.

For the week commencing

AUGUST 9th, 1909, MONDAY MATINEE.

CHIEF YELLO

THE COW-BOY WONDER

(The Human Ostrich.)

who will at each performance swallow: Swords, Tailor Shears, Forks, Knives. Eat: Glass, Nails, Tacks.

THE MOST ASTONISHING AND THRILLING EXHIBITION.

Doctors and Scientists are respectfully invited to witness and study this remarkable man's exhibitions.

A most wonderful feat of CHIEF YELLO is to SWALLOW a watch and chain, and the ticking of the watch can be distinctly heard in his stomach; he performs many feats utterly impossible to describe; he must be seen to be appreciated, so take advantage of this chance and be sure to see him.

VAUDEVILLE.

YELLO, "the world's famous scientific paradox or human enigma, is among the curio hall attractions this week at the Museum. Yello styles his performance "a puzzle to medical scientists." He swallows "saws, bayonets, swords, lizards, files, frogs, electric lights, forks, tadpoles, watches, safety pins, fish hooks, pottery, china and other bric-a-brac."

FREAK AT MUSEUM SWALLOWS ANYTHING.

Whether it is a delusion or not, Yello, billed at the Museum, swallows such a varied lot of articles that an ostrich might view him with envy.

Among the articles which Yello apparently swallowed with relish were tadpoles, saws, files and other articles not considered delicacies. He bites iron spikes in two with his teeth and does other remarkable things.

His speeches to his audiences are most characteristic. He introduces his Snake-Act, with:



"TOYING WITH DANGER, FLIRTING WITH DEATH."

"Here I am ladies and gentlemen, toying with danger, flirting with death;" and, opening the mouth of a rattler continues "See those fangs? They are the initial of the hypodermic syringe."

His feats of swallowing are prefaced with:

"Ladies and gentlemen, with your kind and undivided attention, I will endeavor to mystify you as well as please you

with an exhibition that is strange and outside of the ordinary, showing and proving to you that the human system can endure many strange things, when naturally re-enforced to do so. Showing that all things are not what they seem.

"During my travels in foreign countries, I have encountered many strange and odd feats which have baffled both medical and surgical science, and by so doing they have called my system all kinds of names. My throat they have never attempted to diagnosis. Surgical science have then classified me as a human enigma, in other words pronouncing me to be a scientific paradox to the world.

"In the compilation of this, I have endeavored to be entirely impartial.

"My one and only object is to show things as they really are in the show business, knowing that all things are not what they seem.

"If I have been blunt and by nature of my subject, I doubtless have; if envious, my investigations would have been fruitless, so I waive the sneers of all criticisms and hope for the plaudits of those it is my desire to advise and amuse with my exhibitions."

INDIAN MOTTO.

"Square and Level." "Plain Facts for a Fair Mind."

Indians and Half Breeds are High Bred Americans and have a country of their own and are not persecutors.

In the name of Law and a Just God.

Signed in full,

CHIEF YELLO.

Poor Yello! He was fitly called a "paradox or human enigma"—a puzzle, for where can be found another such?

Absolutely reckless he was by accident almost blinded in his right eye, and within a few years submitted to some 14 operations on the stomach, from which were abstracted tacks, nails, marbles, glass, etc. The sphincters being mutilated by foreign substances, he suffered in addition four rectal operations.

Billed to appear in a neighboring city, and calling one afternoon to see me, he gave a graphic description of his life as he rambled on, one moment in an ecstasy of delight over his achievements, the next down in the depths of self-pity.

He had never married, although he told of two love affairs. The first with a woman he met in vaudeville and who proposed to him. All was arranged for a marriage, when a brother actor told him of her two illegitimate children and in his own words he "shook her."

His next venture was with a dancer who professed to love him dearly. Finding he had saved \$125, she proposed that they bank together, and on starting to fill an engagement in another city, advised that he give her the money for safe keeping, saying: "Dearie, you look after the baggage and I will meet you at the station." "And would you believe it," he said, "when Dearie got to the station, she had faded away and has never been heard of since. That queered me with love."

In the following letters are evidenced the childishness so invariably encountered in imbeciles of all grades, and gives an insight into his inner life.

Baltimore, M. D., Augst 17th, 1909.

Dear Friend.—I write you these few lines Hopping this letter will find you in the best of health and spirts as it leaves me about in the same condition. I really do get agood hand out here. Last night I had to go out Six times and thank the audience for there kindness in appreciateing my act. But it was of no use I had to go on just the same again. They got five other vaudeville acts, But you can see who is the crowning feature, I am makeing the Greatest Hit of my life here. and evey day I change here proveing my self to be the Original Man Of Mystrie; Well I will have some new sittings made this week so when I arrive Sunday I will give you a few good ones which you may term my best likness. You please ask the physician I spoke there to if he would except a photograph. It may seem quick for me to take him But I have seen so many and I can read there ways and I don't think I hav misread him. I take him to be aperfect young gentelman and Obluigeing Physician, So I trust you will give my regards and kind wishes and a letter from him at any time will reach my prompt attention.

"THE GREAT YELLO."

August 25th, 1909

Dear friend Dr. M. W. Barr.—I write you these few lines, Hoping this letter will find you in good health and spirits as it leaves me in fair health at Present. I hope you enjoyed your vacation; I am working Philadelphia, Penn. Museum in a few weeks: and I shall upon you to have a private talk with you that is providing I am welcome.

I often call my mind to days gone by and I think of how I misled you to believe my untruth full tales of woe and etc. But I hope and trust you have forgiven me and class of me as one of your friends. I only want 1. favor of you and no body else can do this out side of you and when I come I will explain it to you. Of course I know I don't deserve it in one way because I ran away from Elwyn when you really did try and do every thing to make me comfortable. And give me a start in life. But I disobeyed and run off to the outer World: In which there is nothing but hard work, trouble, and plenty of it too.

I have learned to work and also learned how to put myself to a lot of suffering and one I can not break: now unless some day I get tripped up in a little trouble; and get put away to a place a little more severe than dear old Elwyn. And of course if my Father had any thing to say He certainly would railroad me to some other place of confinement where I would put my mind to a trade or a good schooling. But I don't go near him not even as much as write him. It would do me no good for he would not answer me; only say I wish he was dead. And if I undergo very many more operations I guess I will be dead sooner than I expect. I will always consider you as a dear friend of mine and will try to take your advice and follow it out if possible. I have other friend at Elwyn But none Like you that I can say that I returned evil for good which is of no praise to me.

I am going under an operation this fall at Baltimore. If I pull through well and good. if not I will be layed to rest close to (Elwyn, Pa.) And there is one friend at the school I never forget, and I will leave him a few papers to collect from any

belongings will be given to him. Well I gess Ill bring my unexpected letter to aclose. Regards and kind wishes I send you.

I remain very truly

Albert B.

Care of The Great Yello.

Philadelphia, Penn., September 28, 1909.

To my ever dear Friend:—When my operation comes; it may be the one that will call me off to my home in glory. And then Ill sleep the sleep that knows no wakening. But Ill be brave to the end: And trust you will lay me in alittle Plot to my self. And alway consider me as one of the Stray lambs. Regards and kind wishes I send you. And Oceans of kisses And prayers of joy and health. Excuse me for my boy-ish ways. But your forever I remain

Albert.

N. B. "My own get up."

Stop and think as you pass bye,
As you are now; so once was I.
As I am now; so you will be
When you are oprated on
20 times. By the surgical Frenternty.

Days do come and days do go
Life does travel; in misey and woe;
Life is cruel; cruel at its best
While Albert; is struggling
And striving and longing for rest.

At this time he requested me to write his father, explaining his physical condition, and asking him to take him home, or at least to recognize him. This I did and append the reply and subsequent correspondence bearing upon it:

H———N. 9|24|09.

Mr. W. Barr, M. D.

Elwyn.

Dear Doctor.—I have received your letter & was glad to hear from you about Albert. My dear Doctor you must excuse me but I have to laugh. He is the greatest storyteller I have ever met. I have received such letters as yours from

every place Albert had occasion to visit. He has deceived all others & he is deceiving you. Dr. I know about his physical condition but he has nobody to blame only himself. It is not too long ago when he was operated on in New York in the Belevue Hospital and was relieved of a quantity of shoelaces, glass and several large safety pins which he had swallowed. He has been home several times & always was welcome. The last time he visited us in Brooklyn, N. Y. last year & his mother and me was glad to see him. We allways have recognized him & have tried to persuade him to lead a home life but Albert is a roling stone, he has visited us here several times but all at once he was gone & we would not hear from him for several months. For years he has traveled as a son of a Indian Chief by the name of Albertus Pius & has even sent a claim to the U. S. Government for recognition as a Son of the white Bear. He has proclaimed to our neighbors and Friends that his Mother is a french Canadian & I was not his Father but we never took it sirius because we allways knowed that he was not responsible for what he was saying. I could sitt all night Dr. & tell you about him & his tricks but after all there is no harm in him. The trouble now is that winter is approaching & he is looking for a place to shelter but as soone as Spring comes again Albert is off. He has done this for the last 8 or 10 years. As I said before we are allways glad to see him but we would never under no circumstances take him home to stay with us as he has a terrible temper & he could do something in his rage we would be afraid of.

Yours very truly,

H. B.

Boston, Mass., Oct. 2nd, 1909.

To Dr. Martin W. Barr.—I received your letter from my father And I am sending you acopy of my letter to him true I have done much in the past. But I am going to do better in my future. I am very sorry that my father should claim that he had a son; and a untruthfull Son and away ward one.

Why could he of not tried to have brought back his prodical boy. But the Good Book says. Parents proke not your children to wrath. I don't think I was born with a temper like

the snake or the whale. Well if I had that temper in my infancy they should of curved that long before they sent me to Elwyn. Your kindness has made me the well ballanced man in the nervous World. So if my father will not look upon me as his Son. I will look upon you as my God Father and my chief adviser, and as my very, very, very, But of all Best friends.

Yours Very Truly I remain For Ever,

Prof. Albert N., Museum.

Electric Sword Swaller.

Boston, Mass., Oct. 4th, 1909.

To My Father.—I have received a letter and was much surprised to learn of how you accuse me being a story teller the greatest you have ever met. I certainly must laugh to think how false you are: and as a story teller I think you are my equal. And second. I take after you. I am your hight your weight and your built and the very picture of you. In regards to my physical condition. I must say I am to blame for the greatest part of it. of later days But I have reached the top of the stairs most pinecal and am on the road to suddess of name and fame. Will you name a few of the persons you claim I have decived Let them tell there tale of woe; and me defend myself. then we will hear of both sides as the law calls for. You know my story goes into Court just as well as yours. In regards to the 8 or 10 winters you claim how many of them did you shelter me from. How many letter did you write me since I been away from Elwyn and do you know I still got them. don't exaggerate makes things larger or more than they are.

Was I married like Charley Did I run away from my wife. Did I run bills against you. Did I lay in a hospital and have all maners of bad dease of women. Did I like Herman run bills against you. Did I go to New York and run over two children and kill them. Did I ever have my name in a paper as on a charge for murder. Did you. then take him back to Hazelton and then did you not start him out afreash. Then did not Walter have to leave Hazelton for a charge of breaking open cars. Did he not get picked out of the gutter

as a drunkard and get a job in a milk dairy Then. Did he not do the young fellow who helped him from the Salvation Army. Then was he not drunk the morning he fell down the Elevator shaft. Then did he not work on all the Street railway cars in New York City And get discharged for stealing nickels or forgetting to ring up the fairs.

Did not George loose all his jobs. the same. Did he not acuse George Snyder his own Cousin of robbing him. It is well for them all to say I am bad. But I only wish to God that you will out live them all as they all are waiting for you to die. so they will get your money I am not looking for any and furthr more I am sober and reliable. Did I tell people you tried to insult my cousin Katie Huichart. Did I not always speak good of you. Did I not always speak up for you and I can prove to what I say. Of all my ennmines I got. That is why Walter Blackens me to lighten him self up. But I gess I got as much as any of them When it comes to showing It up. And it was got honest to. Futher more I was never in Jail. Is that not good that I am—as I am. But I love you just the same And if you will only be leave me to be as I claim not as Walter and others put me to be. Well we will let by gones be gone. and love each other. Just the same. Blood is thicker than Water so they claim But Scince says two thirds of our blood is salt water. that is why I love Dr. Barr as well as others. Well I will close Hopping to hear from you soon I send my best love and regards to you father and mamma Hopping this will find you all well I remain your Devoted Son.

A. N. B.

A. & S. Museum, Boston, Mass.

Boston, Mass., Oct. 8th, 1909.

To Dr. Martin W. Barr, M. D.—In regards to this supposed Father of mine I will never recognize him any more as long as I live. What he wrote to you, that was his side of the Story. Allways rember there are two sides. I am suffering alot. I don't think I can stand it much longer So Some day you will hear of my last. I am going to finish it all in a nice way. no more trouble for Mr. B. and no body else. But Ill finish it all with my experience some day with a bottle full

of Cloraform or my gun. so if you should hear that I have taken my own life, you will know that my father drove me to it. and I hope and trust that you will for give me. Something seems to hunt me as it drives me mad. at spells I am driven to suffring and I am afraid this is one of the things will drive me to my grave. I will end all suffring. Its to bad But I must go. God bless you: and keep you and make his face shine down upon you.

Days do come
And days do go
Life does travel
In misery and woe
Life is cruel.
Cruel at its best
While mankind
Does struggle and strive
And long for rest.

Oh I hate to do it,
But I am called and I must go
I may go very soon as something is driving me mad.

He did not commit suicide, and the following clipping from a New York paper gives the next news of him:

"FIGHTING RATTLER'S BITE."

Surgeon's Using Anti-Venom Toxin to save Victim.

New York, Nov. 1st, 1909.—Five physicians of the Post-Graduate Hospital operated to-day upon Albert P., a snake charmer who was bitten on a finger of his left hand by a three foot rattler and they are hopeful of his recovery without an amputation, although his arm had swollen to the elbow.

Anti-venom toxin was procured from the Bronx Zoo and a tourniquet was placed about the left elbow to prevent further progress of the venom. An incision was made into the forearm and a pint of blood drawn off, after which the toxin was introduced and the wound partially closed. The right peritoneal cavity was also opened and two teaspoonfuls of the anti-toxin forced into his blood there. Infusions of saline solution were also resorted to dilate the poison.

Later (March 4th, 1910) he writes:

"While in the act of swalling abay note and discharging a dubble Barrell gun on the same, I happen to bend a little to much forward and sent the bay note through my stomick percing through the Walls of the abdomen, But I comeing along all right. The stiches were removed yerstday.

"Good bye and good luck to you."

While under treatment, the Doctors discovered also pulmonary tuberculosis in a well advanced stage, and recommended his admission to a tuberculosis hospital.

Instead of following this advice he sailed in April to fill an engagement abroad, which proved of short duration; another bite from a rattler bringing him home in the middle of July.

He recovered sufficiently to fill an engagement in Montreal, Canada, but in the latter part of September, his condition necessitated another operation—the sixteenth—on the stomach, from which was removed a large accumulation of foreign bodies.

From this, with his remarkable powers of recuperation he again recovered and is still pursuing his peculiar avocation.

Herein is an example—not wholly typical—of exaggerated egotism so characteristic of the imbecile, which in varied directions excites and stimulates the mental and moral sensibilities dominating with a power as entire as that of alcoholism.

Native wit, talent, perseverance, powers of endurance and rapid recuperation, all that might be priceless to the normal individual, be he soldier, statesman or student, are for him, as are all gifts,—physical, mental and moral—simply enslaved by the emotions, and he can accomplish nothing except at their bidding. An intelligence keen enough to recognize his own deficiency and the world's ignorance of it is led by the same powerful ego to devise means to further deceive, finding absolute intoxication in achieving each deception.

To this end the concentration and perseverance, which with the normal would lead to invention or to success in scientific or literary fields, is bent upon the one aim of deception. And yet he is not wicked, but rather obsessed in whatever direction the ego may indicate.

Could mankind be brought to understand such an anomaly the necessity for its permanent sequestration—not incarceration—would be manifest. As it is, there is for such absolutely no protection. A derelict upon the ocean of life he drifts, a menace alike both to society and to himself. Again for his brothers, as for him! Alas, poor Yello! in a perpetual childhood uncared for and unprotected he grows more reckless and Life for him begins only when at last he can say *ad sum*.

NOTE.—The foregoing sketch is printed with full permission of the subject, who particularly requests that his pictures be used; a further confirmation, if such were needed, of the egotism of the imbecile.

M. W. B.

STUDIES IN HEREDITY—INBREEDING.*

BY FREDERICK HOWARD WINES,

Editor of *Institution Quarterly*.

SELECTED BY THE EDITOR.

ON page 12, the reader will find an interesting citation from the second chapter of the second book of Blackstone's Commentaries, on "Title by Descent," in which the complexity of heredity is discussed from the legal point of view, with reference to its effect upon the inheritance of titles and estates. Such complexity is a fact, susceptible of mathematical demonstration. Whether it is apprehended from its legal or from its biological side, it presents the same aspect, and is beyond dispute.

Judge Cooley, in a footnote to this chapter, records a remark which may well serve as a text for the present article. He says:

"If two men and two women were put upon an uninhabited island, and became two married couples, if they had only two children each, a male and female, who respectively intermarried, and in like manner produced two children, who are thus continued ad infinitum; it is clear that there would never be more than four persons in each generation; and if the parents lived to see their great grandchildren, the whole number would never be more than sixteen; and thus the families might be perpetuated without any incestuous connection."

We have seen, in previous articles of this series, that lines of hereditary descent may be graphically represented in either of two forms; one of which is the ancestral circle or wheel of heredity, and the other has been loosely termed the "lozenge." The pattern of the biological fabric of human society (which

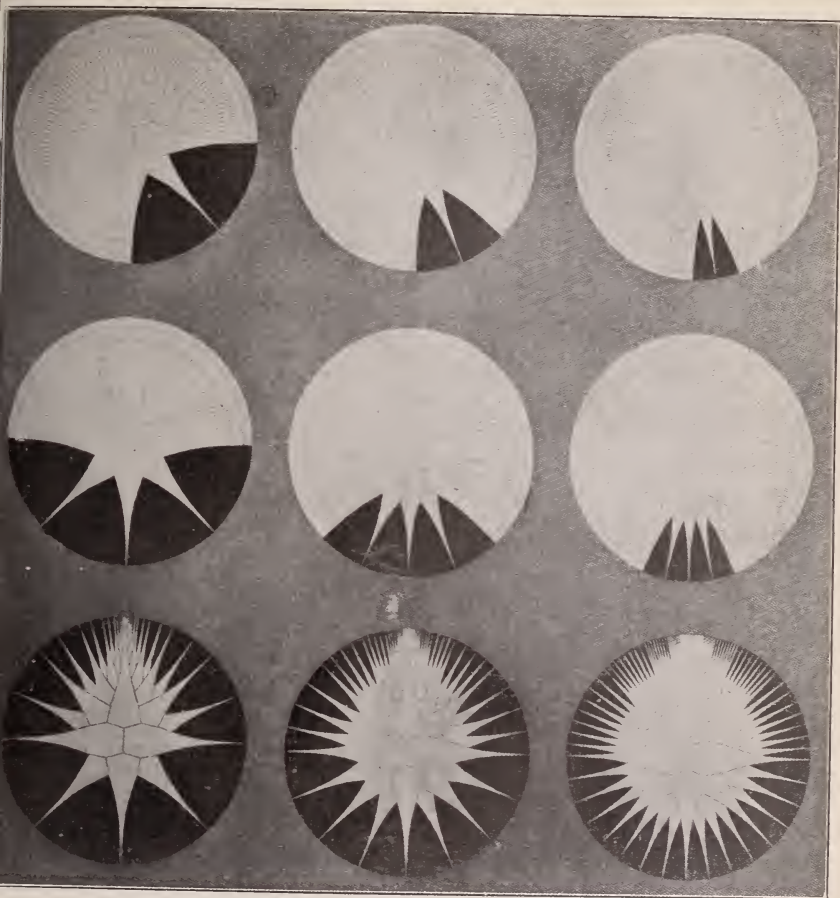
**Institution Quarterly*. Published by State of Illinois: Board of Administration.

in its totality is a unit) is a network of irregular meshes formed by the crossing of hereditary threads connecting particular ancestors with particular descendants, near or remote.

In the ancestral circle, starting from the centre with any individual, we trace his various ascending lines of heredity through a theoretically infinite series of concentric circles; and with each successive circle the number of these lines doubles. The number of one's possible ancestors is an infinite number. Owing, however, to the intermarriage of kindred—cousins, of any and all degrees, according to the number of generations separating them from their common ancestor—a constantly increasing percentage of possible ancestors requires to be blotted-out, because they are duplicates of each other.

In the figure of the lozenge, on the contrary, inasmuch as it is designed to show descent from actual ancestors only, no duplicates are included, and there is no blotting-out. The lines shown may be traced in either direction, upward or downward, and they connect some ancestor or pair of ancestors with some given descendant. The lozenge terminates in a point at each end; but these points may be connected by any number of distinct lines of descent, almost without limit.

Now, if we make use of these two modes of illustration to impress upon the student's mind the significance of Judge Cooley's observation, and its truth, we can carry it much farther. Let x represent the number of one's ancestors of any given degree, and n the number of the generation to which we extend our inquiry. Then x will always equal 2 raised to the n th power. The mathematical equation $x=2^n$ is the fundamental law of hereditary derivation, or of the social (communal or racial) genesis of the individual. Instead of assuming that two men and two women were marooned upon an uninhabited island, why not assume four men and four women, or eight men and eight women? The principle is the same, regardless of their number. The entire globe might be repopulated by the issue from a single pair, but not without the conjunction of brothers and sisters; or from two couples, without the union of any man and woman more nearly related than first cousins; or from four men and four women, without mating any pair more nearly akin than second cousins, and so on.



F. H. WINE'S DIAGRAM TO ILLUSTRATE INBREEDING

The three upper circles show obliteration of duplicated ancestors who are first, second, or third cousins, and of their progenitors. The second row of circles shows the effect if an individual is the descendant of double cousins. The circles in the lower row indicate what would happen if one's entire ancestry consisted of double first, second, or third cousins.

The above diagram contains nine ancestral circles, each of which extends to the tenth degree. The three circles in the upper row show the amount of duplication of

ancestors in case one's parents are first, second, or third cousins, that is, where they are descended from one common grandparent, great-grandparent, or great-great-grandparent. The three in the second row show the amount of duplication (which is twice as great) where one's parents have two common ancestors—grandparents, great-grandparents, or great-great-grandparents—and are therefore double first, second, or third cousins. Those in the bottom row show the result, if, adopting Judge Cooley's hypothesis, one's progenitors of every degree, both male and female, were first, second, or third cousins, and there were never more than four, eight or sixteen persons in each generation.

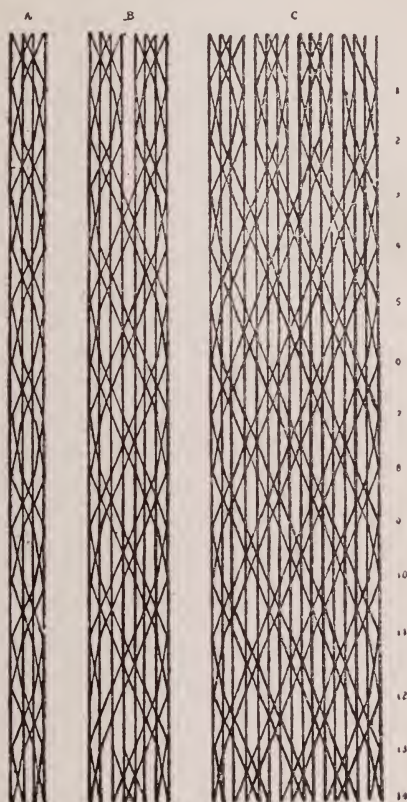
The number of duplicated ancestors who are blotted out from each of these last three circles, and the corresponding percentages, are as shown in the following statement:

DEGREE	EXPUNGED			PERCENTAGES		
Third	4			50.		
Fourth	12	8		75.	50.	
Fifth	28	24	16	87.5	75.	50.
Sixth	60	56	48	93.75	87.5	75.
Seventh	124	120	112	96.875	93.75	87.5
Eighth	252	248	240	98.4375	96.875	93.75
Ninth	508	504	496	99.21875	98.4375	96.875
Tenth	1020	1016	1008	99.604375	99.21875	98.4375
Total	2008	1976	1920	98.431	96.862	94.117

This is close inbreeding. The circle in the left lower corner represents the closest inbreeding possible, unless through the union of brothers and sisters. It is probable that inbreeding carried to such an extreme would terminate, sooner or later, in the extinction of the family, by means of a diminished birth-rate, an augmented death-rate, or a combination of the two.

Reverting now to the figure of the lozenge, the effect of inbreeding appears, in a different form, in the diagram printed upon the opposite page, which exhibits the hereditary relationships between the four, eight, or sixteen individuals in each successive generation, beginning with the imaginary castaways on three uninhabited islands. Observe the lace-like pattern of each of the three strips, (resembling so many rib-

bons), due to the ceaseless interweaving of the lines connecting parents and their immediate offspring by pairs—two parents and two children, without end. The two children of each pair are supposed to be of opposite sex, brother and sister. From each intersecting point, where lines cross, like the web



DIAGRAM

Showing lines of exclusive heredity descent from two, four or eight sets of ancestors, where there has been no admixture of alien blood

and woof of any textile fabric, two lines diverge in an upward, and two in a downward direction. Since every human being has two parents, the number of upward divergent lines can be no greater; it is invariable. On the other hand, since the number of children of a single pair is a highly variable number, we

might have, if we were illustrating a real and not a suppositional case, instead of two, anywhere from one to a dozen or more downward divergent lines from any two points; or, in the case of half brothers and sisters, from any single point. The average number to each pair is commonly assumed to be four.

In this diagram, the lines which have been blotted-out from the ancestral circles are omitted. But no such omission or blotting-out can eliminate from the composite heredity of the individual a single ancestral strain. The formula $x=2^n$ still applies. Duplication of ancestors means duplication of strains. The number of hereditary strains derived from any given ancestor depends upon two considerations; first, the number of intervening generations, and second, the number of times that he reappears as an ancestor, in different lines.

Thus, in the present instance, inasmuch as the diagram shows fourteen generations from the date of isolation of the general groups, and the number of possible ancestors of the fourteenth degrees is 16,384, each of the four ancestors of the first group must have contributed 4,096 strains to each of his four descendants in the fifteenth generation. In the second group, each of eight ancestors contributed 2,048 strains; and in the third, each of sixteen, 1,024. Each line is a twisted line, forever untwisting and retwisting in ever fresh combinations.

The forces of attraction and repulsion in inanimate nature, such as the centripetal and centrifugal, or the positive and negative poles of a magnet, have their counterpart in biology, where we may observe two opposite tendencies, namely, to concentration and diffusion of the force of heredity, by means of conjugal unions more or less remote. One points to change of type; the other to its preservation. The balance which may be presumed to exist between them holds all animate nature to its predestined course, as the attraction of gravitation holds the vast system of stars and central suns in their respective orbits.

Inbreeding is the result of isolation, which reduces the number of actual ancestors, and intensifies certain hereditary strains. Without isolation of some sort, inbreeding is impossi-

ble. This remark has a manifest bearing upon the Darwinian hypothesis, and also upon the doctrine of eugenics, the discussion of which must be deferred for the present.

One important lesson taught by these diagrams is that, just as there is a standard structural type for every animal and every plant, an ideal never realized in actual life, but which every plant and animal more or less nearly approximates, and from which it can not depart, or vary beyond certain definite limits, so do fixed laws of descent govern the genesis of the human race. A plant has both roots and branches, which divide and subdivide in both directions from the main stem, in accordance with mathematical law, until the limit of possible growth is reached. In like manner, each individual is the point of departure of two sets of divergent lines, leading to his forebears on the one hand and his issue on the other, which divide and multiply until his ultimate ancestor is reached, or his family finally becomes extinct. The individual is the bond that unites his roots to his branches.

If the extreme limit of non-incestuous inbreeding is shown in both the diagrams herewith presented for study, the extreme limit of outbreeding is illustrated in the ancestral circle printed on the last page of the August number of the Quarterly, in which not a single line is blotted out, because it is postulated to include no duplicated ancestors. Between an ancestry in which there are no such duplications, and one in which the number of duplications is the maximum possible number, there is a wide range. There are no real examples of either; both are purely theoretical. But every actual family record exhibits a tendency to approximate to one or the other of these two types, according to the manner and degree in which the ancestral blood in the veins of each member of the family has been blended. The final outcome depends upon the frequency and extent of isolation of the several groups to which the origin of the individual might be traced, if the record were complete.

PELLAGRA AND THE PSYCHOSES.

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IN spite of the great zeal with which the various aspects of the pellagra question are worked, exhaustive clinical observations are so far still wanting in literature on the so-called mental disturbances. Already Finzi noticed this want, who in 1902 first published his researches on "Psicosi pellagrose." He comes to the conclusion that this mental disturbance is essentially an insanity and that the psychosis of pellagra is an amentia. This view, which agrees also with that of Tanzi, was resolutely combated by Vedrani, who maintains that the psychosis of pellagra takes usually its course without serious disturbances of orientation and reason.

On the other hand, Warnock claims that symptoms of melancholia are the usual signs of the mental disturbances in pellagra and thus approaches the views of the older writers who assumed especially close relations between pellagra and melancholia; thus Aubert tried to prove, in 1858, that an attack of pellagra may produce the conversion of a heterogeneous disease into melancholia.

This observation was maintained by Aubert with especial stress against those authors (especially Baillarger) who took the psychoses appearing with pellagra for a polymorphia ("la pellagre qui entraine a sa suite tant de meningites, de manies, de melancolies, etc., etait aussi suivie assez souvent de paralysie generale.")

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This view is to-day maintained by Zlatarovic, who observed the development of dysthymias, melancholias, insanity, mental weakness to complete stupor, and dementia on the basis of the nutritive disturbances caused by pellagra, but he never observed mania. In view of these many contradictory opinions, it seems for the reader impossible to form an opinion from the literature.

In the well known monographs of Lombroso and Tuczek, we find only pictures of psychical conditions. The same is the case with most of the other treatises on pellagra, which do not especially treat on the mental disturbances of pellagra.

And even Finzi and Vedrani, who treat exclusively on "psicosi pellagrose" limit themselves to a short sketch of cases and produce only portions from individual case histories as proofs for certain claims. But we cannot renounce here a detailed consideration of the symptomatology and the course of the disease especially as in the absence of a characteristic symptom-complex we must still search for characteristic peculiarities of the course of the disease to decide the question of specificity of psychoses of a certain etiology.

Finally psychoses, which are in themselves not specific, may assume certain symptoms which are to be considered with regard to their etiology.

To clear up these contradictions, it might be advisable to set apart the mental disturbances accompanying pellagra to study more in detail those which are found to have a close relation with pellagra and establish their status and peculiarities. If a sufficient material is studied, we shall find the characteristics which are designated by the various authors as essential for pellagra, and which will be of value to establish the picture of the specific mental disturbance of pellagra.

From these view-points, I have tried to work up the material collected at the Bukowina State Asylum. It embraces the cases received in the time from March, 1904 to September, 1905, in all 72 cases. The shortness of the observation period, which, it ought to be mentioned, was in some cases completed by older histories, is the reason, that in many ways I shall only be able to present a preliminary work for further researches, which I intend to base on observations which shall last for

several years and on experimental-psychological examinations.

In the choice of the material, I placed the limits as wide as possible and following those observers who studied the influence of acute diseases on the causation of mental diseases, I tried to draw those psychoses into the field of my observations which were developed during the inception and the course of pellagra. It will be a further task to establish the more or less close relations between pellagra and insanity and to ascertain in the individual case, whether we have to do with an accidental concurrence of somatic disease and psychosis or if both stand in a causal relation.

If we have, in the former case, the question before us whether the acquired pellagra did not exert a modifying influence, we have to decide in the latter case whether the pellagra must be considered an auxiliary cause, perhaps an exciting cause, or whether the psychosis must be considered as pellagrous in a narrower sense, i. e. as the expression of a cortex disease, caused by the pellagra toxin. Of such a cortex disease we shall be permitted to speak, if the mental disturbance observed in pellagra corresponds with the conditions formulated by Bonhoeffer for the best known intoxication psychosis, the alcoholic insanity: if, indeed, we find certain disease pictures of characteristic symptom groups and of a certain course so frequently connected with the pellagra intoxication that we must believe in an intimate connection governed by certain laws.

To be as much as possible independent of the anamnesis, only those cases were considered which showed the well-known cardinal symptoms of pellagra, whereby we renounce from the beginning the diagnosis: *pellagra sine pellagra*.

I shall now consider the individual cases observed and develop in the course of the case histories the symptomatology of the disease pictures which belong together; in another part I shall give a survey of the spinal symptoms of these cases, and in a third part I shall consider the course and ending of typical pellagrous mental disturbances. The fourth part will treat on the question, how far the observed disease pictures may be considered as specifically pellagrous.

GROUP I. NEURASTHENIA.

(Seven cases.)

The symptoms offered by the cases considered are subjective: headache, pain in the gastric region, pressure in the head, vertigo, lassitude, depression, a sense of unrest, anxiety which may be increased to phobia, fear of something undetermined, threatening, a sense of bodily and mental incapacity and of being sick. Outwardly, the patients appear well behaved, not disturbed intellectually, but incapable of mental and physical work. The process of association is distinctly disturbed, the simplest questions are often answered only after long hesitation. The spirits are depressed, anxious; hypochondriac notions are developing, and receive new stimulation from the subjective troubles from the consciousness of being pellagrous and from their own experience of former serious sickness. In some cases there is slight motor unrest, and desire to move about; but as a rule the patients are laboring under motor impediment, and sink finally into a condition of apathy and resigned inactivity.

GROUP II. ACUTE (STUPOROUS) DEMENTIA.

(Ten cases.)

The milder cases of this group are different from the preceding only in degree. The symptoms merely indicated in the former group exist here in full force. The psycho-motor disturbance is here increased to stupor. The patients who already give the impression of being seriously sick, lie for weeks quiet and apathetical in bed, and if spoken to, catch the words only after several repetitions and marked intonation, and can answer only with great effort in simple words, or do not answer at all. Requests are carried out only with hesitation and visible effort, and often the action once begun is stopped in its first phases, or a request, scarcely understood, is again forgotten. Mostly we may notice that the patients are pretty well orientated and often we notice that the psychic activity is for a short time revived. But in the height of the disease orientation seems sometimes to be also disturbed. Illusions appear. The patients show almost always a sense of in-

sufficiency, sometimes also a hypochondriacally colored sense of being sick, and a consciousness of their psychic disturbance. From the manner in which the stupor develops, we see the patients react in many ways to their perceptions. In many cases in which the stupor developed gradually (we might say, sneaked in), the disturbance of psychic and motor activity was observed without any vivid mental disturbance. In other cases, the recognition of the rapidly appearing disturbance called forth a sense of helplessness. These latter, after the disease had lasted several weeks, voluntarily committed themselves to the asylum, because they were no longer able to fill the demands which practical life made upon them. These were individuals in whom there existed, as the further course showed, a brain with normal capacities.

A duller mental reaction was produced by the observation of the stupor gradually coming on in individuals formerly of unimpaired intellectuality. Thus one patient smilingly confesses that he was stupid, and that he could not answer the questions put to him, because his brain was shrinking. The further course showed that the unfavorable prognosis in this case was incorrect, and that there existed simple mental impediments. In all cases I observed a gradual development of the process, at its height an affectless stupor, and finally a return to the original mental state.

In a quite different manner we see two other patients react, in whom the disturbance developed in a relatively short time. Both (females) lament and complain that they have lost their reason; they fall into anxiety and despair when they cannot find the right answer, produce with visible satisfaction the knowledge which they still possess and accept gratefully the help offered them. One of them explains her mental short-comings by hypochondriacal conditions.

That the sense of insufficiency distinctly expressed in these cases, may also assume a melancholic coloring, is shown in the case of Palladia J., whom her inability to prevent the impoverishment of her family, disheartened so much that she committed suicide. Likewise another patient (male) used the knife on himself, because he could not stand it any longer, that wife and children should have to support him.

In such cases, the view expressed recently, to explain attempted suicide of pellagra patients as a symptom of mental aberration, is not correct. Besides the symptoms described, there appear in some cases which are characterized by an especially severe course, temporarily katatonic symptoms (*flexibilitas cerea*, posture and motion stereotypies). I should especially mention the peculiar motor helplessness of one of the female patients. There existed with her an uncertainty between different innervations, until she found the right one. This patient claims also our attention on account of the strong suggestive action which some impressions had upon her.

The strong psychical weakening is certainly a favorable condition for suggestion. The putting on of a clean shirt is among the incredibly poor population certainly not a very common action, and that this should suggest the idea of laying out a dead body is explainable by the hypochondriacal character of pellagrous patients. In a similar manner, the observation of her whispering weak voice in Eleana O. suggests to her the idea that she has been smothered, and she assumes the position of a dead body. With the patients of this group the disturbances of the memory were especially marked; the patients noticed this themselves and they bore these disturbances as very painful symptoms. Disturbances of the memory are mentioned by Tanzi as a typical symptom of pellagrous mental disturbances. (*Il pellagroso e quasi sempre trasognato smemorato*—the pellagra patient is almost always a memoryless dreamer). I want to mention here, in opposition to Wernicke, that in those cases, which we may call pellagrous dementia, weakness of memory does not play such a part in the symptom picture that we can consider it a characteristic symptom of pellagrous dementia. The disturbance of memory observed in the average cases of pellagrous dementia are mostly less marked than in the cases of group II. This circumstance alone renders it doubtful that in these latter cases we have only a simple absence of the symptom; this view is supported by the vivid consciousness of the patients of their forgetfulness. If we consider also the easy return of the memory, the extremely slow power of conception of the patients, furthermore the fact that they are usually able by long study to call back into

memory the apparently forgotten impressions, we cannot well accuse them of a disturbance of memory in the full sense of the word (which might be compared with the well-known organic disturbances), but we must rather ascribe the disturbances of memory to the general difficulties in performing the psychical processes.

GROUP III. AMENTIA. (ACUTE CONFUSIONAL INSANITY.)

(Thirty-two cases.)

The appearance of conditions of mental aberration is common to all cases of this group. I omit here those cases for which no close connection with pellagra could be established; in individual cases there exist, indeed, very essential differences which are partly explainable by the fact that the individual patients came under our observation in various stages of the disease. But that the various pictures belong together, I could establish from cases which could be observed in their whole course. Some of these case histories were for this reason given with greater details.

After a prodromal stage, which shows essentially the symptoms of the first group, appear usually terrifying hallucinations which are accompanied by vivid emotions and violent motor excitation. The patients see the house burn, a whole village stands in flames, enemies attack them, wild animals rush upon them, wolves crawl from under the bed; the devil appears, they think they are cut to pieces; machines cut their heads off; more rarely they have harmless dreamy visions; heaven opens and God appears; the archbishop and the clergy appear; figures pass by in great multitudes; they perceive a fishing scene, a harvest scene, etc.

The hallucinations give occasions to motor activity. The patients run away to escape the fire, defend themselves against their persecutors, make violent resistance to the illusory actions performed against them. But we find here also motor phenomena, in which a connection with hallucinations seems doubtful. Thus one patient turns unceasingly around his own axis, utters peculiar grunting sounds. Another suddenly jumps up from his bed and knocks senselessly on the door, but returns quietly to his former place when the door is opened.

The duration of these conditions of mental aberration shows considerable difference in the different cases; sometimes it is limited only to a few hours; in other cases it lasts several days. Then follows a more or less long interval in which the patients are weakened in mind and body, and sometimes they are stuporous, but they show only slight disturbances of orientation and have a vivid consciousness of being sick, whereupon a similar condition of mental aberration begins. But if the intervals follow close upon each other orientation will in the meantime be lost.

A series of other disease pictures shows a deeper disturbance of consciousness; the patients appear somnolent; muttering deliriums come on, which cannot be distinguished from grave meningitis and typhoid deliria. If the patient suffers at the same time from diarrhoeas, which are frequently observed in pellagra, especially before death, we have the symptom complex called typhoid pellagra. This picture develops either from the condition described above, or the mental disturbance appears, if the corresponding conditions are given, (bodily exhaustion, severe intoxication) rather rapidly without any connecting link. Even now we may still observe a complete retrocession of the psychical and somatic disturbances, but more frequently death supervenes. But one of the patients (female), we see, enters into a further stage of pellagrous mental aberration which is characterized by profound dementia and by the appearance of short, partly non-hallucinatory conditions of mental aberration. These conditions are often not marked by emotions and lead to impulsive actions, which are in many cases the cause of their being brought to the hospital.

But a stage of dementia does not always seem to appear only as a result of a grave psychosis; but we have then usually a longer duration of the disease in which from the anamnesis there existed merely somatic symptoms, or in which there appeared short hallucinatory conditions of aberration.

Finally, I want to point to the occurrence of katatonic symptoms, (*flexibilitas cerea*, posture and motion stereotypies, negativism, verbigeration,) which were also observed in the patients of this group. One woman made for hours and for days a uniform arm motion and repeated with it always

the same sounds. She, too, showed marked posture stereotypies, which she interpreted in an illusional way. Thus she considers the extreme backward flexion of the head as the effect of an iron cap. Observation of this patient leads also to an understanding of certain motor disturbances as the accompanying movement of the lips when she was asked to show the tongue and the bagging, bulging out of the lips. Thus the patient carries the hands to the mouth, evidently because the centripetal stimuli from the muscles of the tongue and from the mucuous membrane of the mouth are not sufficient for the formation of sensations of position and motion and have to be replaced or completed by touch sensations of the fingers.

GROUP IV. ACUTE DELIRIUM.

(Two cases.)

The two cases of the fourth group are only distinguished from those of the third group by the intensity of the disease symptoms, hallucinations, aberration, motor excitation and the shorter course, which leads to death. For this reason the conception as acute delirium seems justified. Remarkable is the lack of rise in temperature. A normal temperature has also been observed by Italian authors in similar disease pictures of pellagrous origin.

GROUP V. KATATONIA.

(Ten cases.)

Of the cases of the fifth group, the majority belong to katatonia, from the symptoms, course and ending. In three cases (females) there appeared a condition of excitation which ended in uniform stereotyped actions, wild jactation and verbigeration. The patients did not show marked emotion and were in no way productive. In one case, a stage of hallucinatory aberration preceded the condition. One was said to have been insane two years before. In all three cases there was a relatively rapid transition into a demented stage in which posture and motion stereotypies, impulsive actions and incoherent talk were observed. Two patients were received at the hospital during the terminal stage. One of them had

already in former years been several times in the hospital. In the other case, there appeared at first posture and motion stereotypies and marked talkativeness, later this disease picture was changed into a permanent negative phase. In another case, I observed an interchange of negativism and *flexibilitas cerea*, besides there existed also many posture and motion stereotypies. One female patient showed, when she came to the hospital, marked paranoid symptoms, suspicion and fairly systematized delusions of persecution and for all that no disturbance of intellect at all. But in a short time there occurred a transition into dementia with marked katatonic symptoms. In one case the katatonic symptoms were marked from the beginning. Another one showed on his admission to the hospital, a condition of katatonic excitation; after a few days a remission took place, and a new katatonic phase commenced. My observations were interrupted by the escape of the patient, which was effected in an impulsive manner.

GROUP VI. ANXIETY PSYCHOSIS.

(Three cases.)

The violent, fluctuating anxiety affect, the motor unrest, the anxiety ideas and the "phonemes" completing them determined from the first the diagnosis of an anxiety psychosis. It is true this disease picture is complicated by extraneous features. Patient shows a marked sense of insufficiency, appears in the intervals between the attacks slightly stuporous and resembles in this the cases of groups two and three. Later on, after the anxiety attacks have disappeared, the mental weakening gets stronger; the second phase is gradually lessening as in the patients of the groups mentioned. In the second case, the psycho-motor weakness changed in the beginning by turns with violent anxiety emotions and motor unrest. Temporary ideas of persecution and of having committed sins, were here also observed. Later stupor developed also in this case.

The peculiarity of this stupor and the course of the second phase in this patient did not permit the assumption, in the progress of the disease, of melancholia attonita, but shows

rather after the disappearance of the acute psychosis, the real character of the disease picture. But in so far as it was also present in the first phase of the disease picture, the latter deserves the appellation "pellagrous." By the conditions of hallucinatory aberrations (here too were hallucinations of fires) we are, besides, lead to a relation of the case with the cases of group III.

The third case represents a typical depressive melancholia.

GROUP VII. MANIC-DEPRESSIVE.

(Two cases.)

Of the two cases, one showed the condition of mania; to determine this case, the subjective pellagra troubles formed the basis. In the other patient, the condition picture of melancholia, which was present at first, changed after a short interval into mania; and after the outbreak quieted down, the patient was distinctly stuporous.

II. SPINAL DISTURBANCES.

Among the nervous symptoms, I could also in my cases establish the well-known disturbances on which Tonnini has written a special treatise: namely, increase of the tendon reflexes, increase of the mechanical muscular excitability, tremor of the fingers, rigidities and spasms in the muscles of the lower extremities; spastic gait, diminution of the tactile, thermal, farado-cutaneous sensibility, paraesthesias, ataxia of the lower, in rarer cases of the upper, extremities and Romberg's symptom. I would especially mention the appearance of muscular spasms. I could repeatedly observe tonic spasms in patients who were in the terminal stage of pellagra, which agrees with the experiences of Tonnini. They were especially marked in one case. The case history says about him: The patient lies stiff on his back, elbow and wrist joints flexed, also the knee joints, the feet show plantar flexion. In all extremities severe spasms are present. A complete extension is impossible. The upper arms are abducted and adducted in jerks; the hands perform slowly extreme rotations. When drinking motions are made before the patient, he tries in jerks to bring his hands to his mouth, visibly combating the in-

voluntary contractions of his arms and hands. At last he succeeds in bringing the wrist joint of the spasmodically flexed right hand near the mouth. The same spasmodic phenomena continued the next day. The head, too, is held in maximum spasmodic lateral rotation. On the next day, on which death occurred, I observed also jerkings of large muscle bundles of the lower half of the face and of the fore-arm.

Clonic spasms were also observed in a female patient: In the morning the patient lies on her back, the eyes are closed, the upper arms are adducted, the fore-arms flexed at an angle of 90 degrees, which positions are kept fixed. In the region of the left lower facial nerve, I observed fine tremors which do not lead to any motor effects, also others, coarser ones, which draw the whole half of the mouth downward. The same tremors are also observed, though less severely, in the right lower facial nerve. The mouth is drawn a little to the left. Similar tremors of fine and coarse muscle fibres are also noticed in the sterno-cleido-mastoid and pectoralis on both sides. The upper arms perform adductions and abductions in a jerklike manner the lower arms, flexions and extensions. The thumbs are now and then adducted in spasms, the fingers flexed. Similar spasmodic movements are also observed in the lower extremities. There exist also spasms in smaller bundles of all muscles of the extremities.

Passive movements find everywhere spastic resistance. The pupils react promptly to light and are of equal size, reflexes increased; spontaneous defecation and micturition. The patient does not respond when called by name, the face is distorted when pain is inflicted; the condition slowly disappears until the next day.

In contrast with the first mentioned case, no severe nervous disturbances were observed in this patient, neither before nor after the appearance of the clonic spasms; on the other hand Tonnini observed clonic spasms only in the third stage of pellagra. Neither did typhoid pellagra exist in this case, a condition in which the patients are inclined to clonic convulsions (Lombroso.)

I would also mention that in some cases a paresis of the lower facial nerve was observed which in one case developed

during her stay at the hospital. The occurrence of this disturbance is also in so far remarkable as it is of value in the question of the relations of pellagra to progressive paralysis considering also the pupillary disturbances in the third stage. While Baillarger once tried to prove, in opposition to Verga, that pellagra may be followed, not only by mania and melancholia, but also by progressive paralysis, the question is rather analogous to that of specific alcoholic paralysis: "Is there a form of paralysis produced solely by pellagra?" This question is answered affirmatively by Pianetta, negatively by Verga.

Among the anomalies of sensibility, the disturbances of farado-cutaneous sensibility are strikingly marked, on account of which I tried to determine it exactly on the skin of the forearm, which according to Tonnini is especially non-sensitive to faradic irritation. In all cases examined, I found extreme weakening of sensibility.

III. COURSE AND TERMINATION.

In the consideration of the course of the disease only those forms of pellagrous etiology will be considered which are represented by a large number of cases. As far as a sufficient anamnesis was obtainable, a phase of the disease preceding the psychosis could be established in which the symptoms occurred, which characterize the first group. But while the morbid process in certain cases was limited merely to these symptoms, and under corresponding treatment in a short time great improvement was obtained, the other cases after this short prodromal stage, passed onward to more extensive disturbances. A gradual transition was observed between the cases of the first and second group. In the milder cases of the latter group, there existed a psycho-motor weakening, distinctly marked, indeed, but oscillating and tending to remissions and which apparently could be overcome by strong sensory stimuli or strong efforts of the will; in the graver cases, there existed heavy stupor interrupted by motor irritation symptoms. The duration of the disease lasted from one to six months. A parallelism between psychic and somatic symptoms during the course of the disease was clearly marked.

Of the cases of group three, only those shall be considered whose whole course of the disease can be taken in.

In five cases the psychosis set in after a short prodromal stage, with delirium, which in a very short time disappeared. Thus there appeared in one case, during three successive days, conditions of aberration, which lasted only a few hours. Two other patients showed also short delirium which it is true occurred outside of the hospital.

As to the further course, the cases just mentioned behaved differently. In two cases, convalescence followed immediately upon the crisis. With the other patients, there intervened a stage of stupor, which lasted in one case a few days, in the other several weeks. In the majority of the cases of group three, there existed conditions of aberration, lasting a long time, which, it is true, showed a tendency to remissions and made their appearance intermittently. Here, too, the delirium was frequently followed by stupor, or the existing stupor was interrupted by delirium. In one case, a phase of aberration with several exacerbations and which lasted 14 days, could be distinguished, which was followed by a gradually decreasing phase of stupor, lasting the same length of time. In one case the stupor preceded the delirium. The delirial phase showed several climaxes and lasted about three weeks. The same course was observed in another patient with the difference that the stupor came on more rapidly. Another patient (female) showed a more continuous course of the aberration phase with crisis at ending. In this patient the fact, which occurred also in others, was observed that after the disappearance of the aberration phase she experienced similar situations in her dreams.

While the patients just mentioned were cured, so far as my observation went, three others with a similar course ended in dementia. One of them showed an aberration phase lasting about two weeks with simultaneous symptoms of stupor. After a remission of about a month, a new phase of aberration set in, which ended in dementia. In another case, which also ended in dementia, we find an aberration condition of about a month, which, contrary to the other cases, did not show motor excitation. In eight cases there existed with severe weakening

of the body, a transition of the aberration phase into a condition of somnolence with muttering deliriums. Of these patients, four died, two recovered, two passed into the pellagrous terminal stage (deep dementia with strongly marked symptoms of pellagra.)

The persistence, or only slight improvement of the nervous symptoms in the majority of the patients after disappearance of the psychosis, make it doubtful to consider the underlying process as closed. In fact the longer observation, as well as the fact that certain features which are well marked in the psychosis and are still noticeable after the cure, lead me to suppose that the disease pictures observed are only exacerbations of one disease process.

The question of the relation of these climactic points is now suggested. In one patient I could observe twice a recurrence of the pellagrous neurasthenia. The first pellagra attack seems to be especially frequently accompanied by neurasthenic symptoms, while the skin eruption is followed by a psychosis. As pellagra, as I have already stated, is regularly combined with symptoms of neurasthenia, we may also take in here the majority of those cases in whose anamnesis earlier pellagrous symptoms are mentioned.

I observed the recurrence of pellagra accompanied by mild psychic disturbances in the last attack in two cases. One patient returned after he had been dismissed as cured from his hallucinatory aberration 10 days later with marked symptoms of neurasthenia. The other patient was treated the first time for hallucinatory aberration; the second time he came himself to the hospital, as he feared the insanity would break out again; the same thing happened in the following year. Both times he appeared markedly neurasthenic and showed somatic symptoms of acute pellagra. In another case, there took place during the sojourn in the hospital a recurrence of hallucinatory aberration. As in the majority of the cases, only the recurrence came under my observation, I do not want to say any more on this subject. But I shall endeavor to keep the cases under observation, as the observations made so far need to be completed in this respect.

Of the cases of group V, six could be observed during a

long period of time; all ended in dementia. In one case, the disease lasted 10 years. With frequent remissions, profound dementia developed. Another patient was abnormal from early youth; after the attack of pellagra, the transition into dementia took place rapidly. Another patient (female), who showed at her entrance into the hospital distinct paranoiac symptoms, and a third, who went through a paranoiac phase at home, passed rapidly into katatonic dementia.

The first showed, at the beginning, normal intelligence and the other was, according to information, not below the average intelligence.

Another patient had been mentally disturbed two years before and later appeared slightly demented. The later attack of mental disturbance set in simultaneously with somatic symptoms of pellagra. After a short sojourn in the hospital the patient presented a picture of deep katatonic dementia.

Though the number of cases is too small to make possible a judgment of the relation of pellagra to katatonia, we must at least consider the simultaneous occurrence of both as an unfavorable prognostic sign.

Let us now survey rapidly the termination of the mental disturbances described. Of 42 non-fatal cases, whose whole course could be observed and about whom there existed a reliable previous history, 21 were sick for the first time. Of these 17 were cured, 4 became demented. The others (21) had already passed through former psychoses. Of these 7 were cured and 14 became demented; these figures prove how unfavorable for a complete cure the prognosis of pellagrous mental disturbance is, and this the more so, as even regulation of the hygienic conditions do not protect from a recurrence, as is shown by the cases of recurrence under my observation in the hospital. That the number of recurrences is not decisive for the ending in dementia is shown by the case of patient G. J., who was cured even after a sixth recurrence.

The kind of psychosis seems to be of essential importance. From my cases, hallucinatory aberration seems for single attacks to offer a decidedly favorable prognosis. But the prognosis is more unfavorable when stupor appears, which promises at least a long duration of the disease.

According to kind and intensity, the dementia, which I observed as the terminal condition of those psychoses which were closely connected with pellagra, showed different forms. Especially characteristic are, in this respect, the terminal stages of pellagra, which show besides deep somatic and especially nervous disturbances, almost a disappearance of mental activity and thereby justify the term "paralytic." From these cases there are transitions to the milder cases of dementia, which form the larger number. These patients show together with good time and place orientation, with an external normal behavior and with sound reasoning in things which concern their former conditions, their usual occupations, etc., a dullness of the intellect, a great incapacity for independent activity, marked lack of normal self-restraint, which is the reason for the tendency, also observed by other writers, to break out in violent passion and impulsive actions. The question if there exists a specifically pellagrous dementia (which might be placed on a level with the "pellagrous nature") must be established by further observations which will meet the greater difficulties, as a sharp delimitation of the terminal conditions in various forms of disease do so far not exist. A further difficulty lies in the fact that simultaneously existing alcoholism has a modifying influence on the disease picture, furthermore that in many individuals the pellagrous mental disturbances do not appear until the senium and seems to bring on precocious senile dementia.

If we put the question thus: Are there disease pictures of dementia whose anatomical basis is an injury of the brain by the toxins of pellagra? We must answer in the affirmative, as we saw cases end in dementia, which must be considered as pellagrous in a narrower sense. The symptomatic delimitation can be drawn with certainty in the higher grades of pellagrous dementia, as here only dementia paralytica comes differentially under our consideration. In both diseases, however, at this stage marked somatic changes exist. A closer delimitation of the milder cases of pellagrous dementia, must be expected from their special study by using exact (experimental) methods. In my cases I met great difficulties, as I had throughout only illiterates under my observation.

IV. ON THE CONNECTION BETWEEN PELLAGRA AND THE PSYCHOSES.

In the following considerations, I shall discuss the close connection between pellagra and mental disturbance and try to establish which of the two disease pictures described must be considered as pellagrous in a narrower sense, (that is, caused by a pellagrous intoxication of the central nervous system). This question had to be touched on already above, when some cases were excluded from the symptomatological survey. Here, too, I shall consider the various groups separately.

The symptoms of the cases of the first group appear in their details not specific for pellagra, but offer in their totality a characteristic disease picture. The patients complain always of vertigo, headache and lassitude; frequently also of paraesthesia in the limbs; there exists a very marked sense of being sick with hypochondriacal features; in the looks and behavior of the patients there is anxiety. If we consider also the course, the rapid development in relation to somatic symptoms of pellagra in individuals who formerly had a sound nervous system, finally that in many cases there exists a transition of such disease pictures into pellagrous psychoses, or that these disease pictures change about with the psychoses in the course of the disease lasting several years, if we consider all this, there can be no doubt that such cases must be considered as pellagrous neurasthenia.

The cases of the Second Group are characterized by a distinctly marked stupor tending to remissions, by a deep mental depression, a vivid sense of insufficiency and peculiar subjective troubles. The dependence of this condition on the pellagra intoxication can be established from the close connection of the psychic disease picture with the somatic pellagra symptoms.

The majority of these cases showed at their entrance into the hospital, somatic symptoms of acute pellagra and recovered as the latter improved. There exists, indeed, a complete agreement in the conception of such cases as pellagrous in a narrower sense, though the diagnostic views of the disease are not uniform. The external appearance, the depressed mental condition, the tendency to suicide, etc., explain the

fact that such cases are frequently considered as melancholia; as the connection between pellagra and nervous disturbance is here quite clear, and as patients who suffer from different mental diseases, show some of these symptoms at the appearance of pellagrous signs, the view arose that melancholia was the typical pellagrous mental disturbance. This view was contradicted by Finzi; he ranks such cases under amentia and considers them as mild forms of this psychosis (infection exhaustion).

Tanzi's description of the pellagra patient, in whom no psychosis exists, agrees for the most part with our group. These cases also agree with a part of those which Vedrani calls pellagrous mental disturbance.

Of the cases of the third group, three cases had to be excluded as alcoholic psychosis. But the simultaneous beginning of acute mental disturbance with somatic pellagra symptoms suggests to us that pellagra plays in such cases a part similar to other harmful factors, resembling alcoholic mental disturbance, such as trauma, infection, etc.

As to the cases which showed in their course severe prostration and muttering deliria, I have already stated that a distinction from typhoid, sepsis and other deliria could not be made. But just here is the diagnosis as pellagrous psychosis in the narrower sense possible, for it is clear that with manifest somatic pellagra symptoms and with a post-mortem which is negative or only applicable to pellagra, the diagnosis of a so-called auto-intoxication psychosis has much less probability. But we may now also, in conclusion, consider those psychoses as pellagrous, which passed over into that condition.

In four patients the question of the diagnosis of senile psychosis besides the pellagrous mental disturbance must be considered. But in one case the course of the disease speaks decidedly against this view, for only rarely and quite "passim" hallucinations occurred in this case, which caused the patient to come voluntarily to the hospital. During my observation, this patient showed the characteristic signs of mental debility described above, which disappeared as soon as the somatic pellagrous changes improved. In two other cases, too, in whom hallucinations clearly appeared, I could observe stupor,

caused by mental impediments. As stupor is not a common symptom in senile aberration, but is quite a regular symptom in pellagrous mental disturbance, the suggestion lies near to consider it in relation to pellagra. This interpretation is also supported by the fact that with the improvement of the somatic pellagra symptoms, in the cases mentioned, also a recovery from the acute mental disturbance took place. As all four patients had passed through pellagra attacks in former years, we may assume that the diminished resistance of senility promoted the breaking out of the mental disturbance. The case of W. has a special interest. The patient took erysipelas during convalescence from pellagra, he became noisy a day after the fall of temperature, he was restless and delirious. From this we may assume that a defervescence delirium was added to the disease process, unless we consider the erysipelas as the causative factor of the condition of senile aberration.

Differing from the other patients, W. R. showed vivid motor unrest in a condition of aberration. As this patient showed besides very marked features of senile mental disturbance, dull euphoria, diminished attention, confabulation, we may consider his condition as senile aberration, on the other hand, the course of the disease (simultaneous setting in of the mental disturbance with pellagra symptoms, their disappearance with improvement) suggests the assumption of a pellagrous etiology, which is not at all unusual, as senile aberration frequently accompanies somatic diseases (stomach and intestinal diseases, influenza).

The other cases which make up the majority of cases in this group, show many common features, the appearance of short, furious deliria, anxious behavior, terrifying hallucinations, in which especially fire reappeared, conditions of stupor, of shorter or longer duration, and an intense sense of being sick. But in spite of this, we are not justified in assuming a specific pellagrous amentia.

On the other hand, the casual connection between pellagra and psychosis results from the fact that hallucinatory aberration conditions were observed by various writers in the majority of pellagrous cases accompanied by mental disturbances, without any other cause being found for the appearance of

the amentia. The derivation of the pellagra delirium from somatic exhaustion is contradicted by the clinical difference of the symptom pictures of pellagra and those of exhausted conditions (not to omit that in many cases the nutrition is good). Cases with such an abortive course as M. and H.—who after a short phase of hallucinatory aberration, completely recovered and later on showed slight neurasthenic symptoms,—scarcely find an analogy among the exhaustion psychoses. A confirmation of the assumption that the connection between pellagrous intoxication and mental aberration is a very close one and is not brought about by somatic exhaustion, is furnished by the assertion of Warnock that patients much more weakened and exhausted by ankylostomiasis never show the same depression as pellagra patients; furthermore that the melancholic depression of pellagrous Arabs was opposed to their disposition to manic forms of insanity. Intense somatic exhaustion might, in some cases, render the demonstration of a pellagrous mental disturbance very difficult, as we then have before us a new cause of psychical disturbance. Thus a portion of the cases observed by Bonfigli might have to be considered as delirium in pellagrous inanition.

The frequent appearance of katatonic symptoms, which were also observed by Lombroso and Vedrani, renders sometimes the interpretation of the symptom picture in young individuals difficult, as we can also observe pellagrous symptoms in katatonia, in which case we have probably a simultaneous occurrence of two disease pictures. In general it may be said that the katatonic symptoms in pellagrous aberration appear only intercurrently, and do not dominate the symptom picture, that the pellagrous stupor is more frequently interrupted by lucid phases and is much more influenced by external impressions than the stupor observed in katatonia, that the hallucinations in pellagrous aberration are mostly visual and have a terrifying character. Of especial importance is the course of the disease, as in simultaneous appearance of acute somatic pellagra symptoms and psychosis a parallelism of psychic and somatic disturbances in the further course of the disease can only be found in pellagrous mental disturbance; furthermore the first attack of pellagrous aberration is mostly

recovered from in a very short time and without injury to the intellect and mind. I may also mention that the differential diagnosis just mentioned is called in question in rare cases, as pellagra usually does not attack youthful individuals.

According to Bonfigli's statistics, psychic symptoms appear in male pellagra patients between the 40th and the 60th year; in females between the 30th and 50th year.

In view of the large size of group III, it must appear strange to us if Vedrani claims that hallucinations and disturbances of orientation are rare symptoms in pellagrous psychosis. Considering the clear connection between pellagra and psychosis, we can scarcely assume that Vedrani (as he speaks only then of a pellagrous psychosis, when no other is present), excluded such cases from his grouping. This procedure would be justified in cases which clinically must be considered as amentia. As hallucinations and disturbances of orientation (as can be seen from my case histories) appeared in a large portion of the cases merely episodically in a symptom picture which in general corresponded with the cases of group II, such a view, which considers the symptoms mentioned as a non-essential sign of pellagrous mental disturbance, would be intelligible to me. In opposition to Vedrani, Finzi and Tanzi lay especial importance on the aberration, as they have only those cases in mind which correspond with groups III and IV.

Bonfigli observed among 86 cases (of which not all, it is true, showed psychic disturbances) in 43 cases mental aberration. (*Delirio vago qualche volta caotico il piu spesso pero a fondo melancolico*—a vague delirium at times chaotic, but more often with a melancholic basis). This author observed hallucinations only in 14 cases and considers them a rare symptom of pellagrous mental aberration.

The two cases of group IV present pictures of acute delirium. Symptomatically and clinically no sign characteristic of pellagra could be established, a circumstance which does not justify us in denying such signs, considering the difficulties in the observation and the shortness of the duration of the disease. The assumption of a causal connection between pellagra and psychosis is in both cases suggested by

the simultaneous breaking out of somatic pellagra and mental aberration.

The cases of groups II, III and IV show symptomatically and clinically a distinct relationship with the mental disturbances observed in acute and chronic infections and described as incubation, fever, infection and defervescence psychoses.

Still closer is the relationship with the psychoses accompanying somatic exhaustion and which in the end, lead also back to an intoxication. (Binswanger's study on these psychoses). An essential difference, however, seems to consist in the fact that in the first group of Binswanger's total lack of orientation, motor incoherence, hallucinations and illusions appear, while in the corresponding cases of pellagra (group II) pure mental impediments exist. As, however, "aberration" is not essential for the definition of acute dementia, the nomenclature proposed by Binswanger may also be used for our disease pictures. I would then call group II acute pellagrous dementia, group III amentia pellagrosa, group IV delirium acutum pellagrosus.

Of the cases of group V, we see in four cases a katatonic excitation condition begin simultaneously with acute symptoms of somatic pellagra. Here, too, we must consider the pellagrous intoxication as a causative factor considering the simultaneous occurrence of acute somatic pellagra symptoms and psychosis. For the other cases, we can only assume a simple co-existence of bodily and mental disease. It is noteworthy that these cases, too, have in their disease picture some features which point to a pellagrous intoxication. Many of these patients show a consciousness of disease which has for its contents the troubles of pellagrous neurasthenia. One woman considers them as the result of hostile influences. The same thing I noticed also in another patient who suffered from paranoid dementia and did not belong to the cases just described. She was twice brought to the hospital for delusional ideas, and both times I could establish the fact that their appearance accompanied pellagra, whose troubles she also ascribed to hostile influences. In neither of these two patients did any

improvement take place after the pellagra symptoms had disappeared.

It was different in a case mentioned above, in which during the pellagrous aberration temporarily delusional ideas appeared.

To exclude categorically a causal nexus between pellagra and psychosis in the cases of group VI, which correspond with the psychoses frequently observed in the climacterium I consider, in opposition to Finzi, as incorrect, as we cannot consider the climacterium as the determining cause. The fact that the mental disturbance developed in connection with pellagrous symptoms suggests the assumption that pellagra was here the exciting cause of the mental disease.

A still clearer connection with pellagra is shown by the sense of insufficiency observed in two cases, and in the stupor symptoms, which, without belonging to the picture of the anxiety psychosis, form characteristic features of the psychoses termed formerly as pellagrous. In both cases, the symptom picture between the attacks of anxiety and after their disappearance is similar to the typical pellagrous mental disturbances of group II. With the cases of anxiety psychosis ought to be mentioned the case of H, in whom simultaneously with acute somatic pellagra symptoms a stuporous condition was observed, which was frequently interrupted by violent anxiety attacks. Hallucinations and aberration were only temporarily observed, so that the anxiety attacks must be considered as primary.

In both cases of group VII, which belong under manic-depressive insanity, I observed only temporary depressive mental conditions, slight psycho-motor impediment, with a sense of being sick. But as such features occur also in manic-depressive insanity, and here too the incomplete observation of the course of the disease did not point to a close connection with pellagra, I will not say more than establish the fact that manic-depressive insanity occurs in pellagra (which was overlooked by Słatarovic). But Słatarovic could also observe cases of agitated aberration in pellagra, under which we must probably count most of the cases of mania-pellagrosa mentioned in literature. Warnock says that mania was a

rare psychosis in pellagra, and points to the difficulties of the differential diagnosis with regard to paralysis which came also under consideration in our case K, at beginning of the disease.

GENERAL SUMMARY.

In pellagra, there occur mental disturbances, which belong to different forms of psychoses. Among them certain cases (belonging to groups I, II and III) occupy a special position, as they must be considered from their development, symptomatology and course as pellagrous in a narrower sense and therefore caused by a pellagrous intoxication of the central nervous system. In the consideration of the other disease pictures, too, I found, they frequently pointed by their course to a causal connection with pellagra. In these cases, too, features in the condition picture were observed, which had to be considered as standing in relation to the pellagra intoxication.

The assumption of a pellagrous dementia is justified; it can be delimited in the terminal stage of pellagra from dementia paralytica, which is alone to be considered differentially. A detailed characterization of milder cases is still lacking. Weakness of memory cannot be regarded as its characteristic sign, as Warnock claims; where weakness of memory is observed in a high degree, it is an expression of psychic impediment (disturbance of apperceptive and associative functions.)

The study of a large number of cases of mental disturbance cleared up many contradictions occurring in literature. The many-sidedness of the condition pictures observed explains the view that all forms of mental disturbance may occur in pellagra.

On the other hand, we find the view that pellagra was producing preponderatingly melancholic mental disturbances is easily understood, as I could also establish depressive features and stupor symptoms in different psychoses. I agree with Finzi that pellagra, as a rule, cannot cause true melancholia, but I must contradict the derivation of the depression in pellagra patients from their exhaustion, as I observed similar symptom pictures also, in conditions of good nutrition and in favorable conditions of life; and Warnock observed among

the same population that reacted to a pellagrous intoxication with depressive conditions, manic states in conditions of exhaustion caused by other factors. The contradiction between the views of Finzi and Vedrani is explained by the fact that both had not the same pictures before them, further that the hallucinations and disturbances of orientation occur in pellagrous mental disturbance mostly episodically.

Among the spinal symptoms, I mention the strong diminution of the farado-cutaneous sensibility. Noteworthy is the occurrence of clonic muscular spasms in the so-called second stage of pellagra.

IS GENIUS A SPORT, A NEUROSIS OR A CHILD POTENTIALITY DEVELOPED?*

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RUSKIN exhibited not a little of the Boundeby snob-bishness combined with British philistine reverence of the "fear God and honor the King type," anent his ancestry. "Deep yearning took hold of me," he remarks, "for a kind of restoration which I began slowly to feel Charles II had not altogether effected, though I always wore a gilded oak-apple very piously in my buttonhole every 29th of May. It seemed to me that Charles II restoration had been as compared with restoration much as that gilded oak-apple to a real apple. And as I grew wiser the desire for sweet pippins instead of bitter ones and living kings instead of dead ones appeared to me rational as well as romantic and gradually it has become the main purpose of my life to grow pippins and see real kings. I have never been able to trace these prejudices to my royalty of descent. Of my father's ancestors I know nothing, nor of my mother's more than that my maternal grandmother was the landlady of the Old King's Head in Market Street Croyden." There is much the same Boundeby cant in Tennyson, albeit a descendant of the Black Prince. John Ruskin was, as

*Continued from *Alienist and Neurologist*, August, 1911.

1 *Praeterita*, p. 17.

Frederick Harrison points out, the only child of a pair of first cousins of set character and no longer young. He lived with his parents continuously until their deaths, one at 79, one at 90. He was nursed till past middle life by parents who devoted their time to him. The father was a singular, prudent, patient, business-like conventional, yet with a taste for art. The mother was of indomitable will, harsh nature, saturninely evangelical according to the Anglican cult. The paternal grandfather was a dashing, jovial spendthrift. The maternal grandfather a sailor, killed by an accident in riding. The paternal grandmother made a runaway match at 16. The maternal grandmother was an innkeeper. Ruskin's mother certainly had dominant bourgeois tendencies. "My mother,"² he remarks, "always felt in cultivated society—and was too proud to feel with patience—the defects of her own early education, and therefore (which was the true and fatal sign of such defect) never familiarly visited any one whom she did not feel to be, in some sort, her inferior."³ There was a hearty, frank and sometimes even irrepressible laugh in my mother. Never sardonic, yet with a very definite Smallettesque turn in it so that between them she and my father enjoyed their "Humphrey Clinker" extremely long before I was able to understand the jest or gist of it. Much more she could exult in a harmless bit of Smallettesque reality." His father seems to have had a far keener literary sense which very logically once came out in a business expression. "I have still," remarks Ruskin,⁴ "a vivid remembrance of my father's intense expression of sorrow, mixed with scorn, as he threw down "Count Robert of Paris," after reading three or four pages and knew that the life of Scott was ended; the scorn being a very bitter and complex feeling in him—partly indeed of the book itself, but chiefly of the wretches who were tormenting and selling the wrecked intellect and not a little deep down of the subtle dishonesty which had caused the ruin. My father could never forgive Scott his concealment of the Ballantyne partnership." . . .

2 *Praeterita*, p. 26.

3 *Praeterita*, p. 122.

4 *Praeterita*, p. 34.

"Over⁵ his dressing table hung one of his own water color drawings, made under the teaching of the Elder Nosmyth at the High School of Edinburgh. It was done in the early manner of tinting, which, just about the time when my father was at the High School Dr. Munro was teaching Turner; namely, in gray under-tints of Prussian blue and British ink, washed with warm color afterwards in the lights. It represented Conway Castle with its Frith and in the foreground a cottage, a fisherman and a boat at the water's edge." His father's partners in the sherry business seem also to have been men of rather broad culture for their occupation. Donecq was Spanish born, partly French, partly English bred. Telford was an English country gentleman living with three unmarried sisters "who in the refinement of their highly educated, unpretending benevolent and felicitous lives remain," remarks Ruskin,⁶ "in my memory more like the figures of a beautiful story than realities." To Telford Ruskin owed the dominating influence Turner exerted over him. On his 13th birthday Telford gave him Roger's "Italy." "At that time," remarks Ruskin,⁷ "I had never heard of Turner except in the well remembered saying of Mr. Runcieman that the world had lately been much dazzled and led away by some splendid ideas thrown out by Turner, but I had no sooner cast my eyes on the Rogers vignettes than I took them for my only masters and set myself to imitate them as far as I possibly could by fine pen shading." His home was of severe order, of narrow conventionality. He was often whipped, was not allowed toys, was exposed to the attraction of forbidden surroundings and compelled to read two chapters of the Bible daily, unpurgated from genealogies or otherwise. While he contingently ascribes much to this, there can be no doubt of the value of the Bible as English literature. The plutocratic stealing of people's property and liberty through the dream contents of Joseph harmed less than the chastity of impotence of that eunuch sycophant of autocracy of whom the puritans would have made short work as they did of the renegade Wentworth whose

5 *Praeterita*, p. 33.

6 *Praeterita*.

7 *Praeterita*, p. 68.

"Thorough" recalls Joseph's dealings with the Egyptian people. Fortunately Ruskin was also permitted to read Pope's "Homer," Scott's poems and novels and, on Sundays, Robinson Crusoe and the Pilgrims Progress. Later his father (a man of sound training and good taste), read to him with spirit and enthusiasm Shakespeare, Byron, Don Quixote and Pope. At 4½ Ruskin had taught himself to read and write by copying print as "most children draw dogs and horses." While most alphabets are evolutions from picture writing and not direct mimics, still there are exceptions, as in the Russian and Cherokee alphabets, where the signs are not identical in phonetic value to those mimicked. There is a dated facsimile of a composition at 7 with a drawing. This is a description of a cloud which the hero, a boy named Harry, proves to be charged with positive electricity by his apparatus. This demonstration is illustrated by a quotation from Manfred referring to the witch of the Alps on a rainbow. From his earliest days his father took him on business journeys in chaises to the north of England, the Lakes and Scotland. On these drumming tours the elder Ruskin and his son visited castles, cathedrals, abbeys, colleges, parks, country mansions and picture galleries. It was not astonishing that with such reading and such travels the child would gaze on the pattern of a carpet, count the bricks on a wall, wonder at the eddies of the Tay "clear brown over the pebbles, watch the sea waves hour by hour, or the rivulets in which the sand danced and minnows darted above the Springs of Wandel." At four Northcote painted him as a chubby child in a white frock with a blue sash. The rod in his mother's hand had made sitting still a virtue. When Northcote asked him what he would like as a background Ruskin replied bluehills, the hills he had seen from Perth. This was quite the pose of a child so educated. At four he preached a sermon. "People be dood. If you are not dood God will not love." In a letter written at the same time the same childish imitative platitudinosity appears. Mentally Ruskin always retained the tendency thus generated. At 7 he composed and illustrated: "Harry and Lucy concluded being the Last Part of Early Lessons in four volumes. Volume

1 with copper plates printed and composed by a little boy and also drawn" is the title page. One part and a quarter were completed. At nine he wrote a poem entitled: "Eudosia," a poem on the universe. In this period he began to use his own words, to lead a very small pesky, contented, conceited Cock-Robin-Crusoe sort of life in the central point of which it appeared to me that I occupied in the universe. In later years he analyzed the system under which he was brought up. At 7 he had been so dominated by almost the Jesuit ideal of peace obedience as to become *periude accadarore*. He had therefrom, he claims, the habit of fixed attention in eyes and mind and extreme delicacy of the bodily senses due to home discipline. This training had resulted in severe calamities. He had nothing to love. His parents and God were to him but powers of nature. He had no companions, no one to assist or thank. He had nothing to endure, pain and danger were kept from him. His "strength was not exercised, patience never tried, courage never fortified." He was not taught manners. Shyness overwhelmed him. He was not trained in accomplishments, ease of behavior or tact. His judgment was not developed: "The bridle and blinkers were never taken off him." A child clearly evincing the precocity of arrest was nursed, swaddled, isolated from humanity and forced by parental authority to regard itself as a sublime genius destined to reform, inform and direct the world. Like Thomas Carlyle he was a swan child early set up on a pedestal. To some extent the evil effects of such training were offset by the attention given nature. The baby spent his first summers toddling about in a garden. At 4 he went to Scotland in post chaise. As an infant he saw all the high roads and most of the cross roads in England and Wales and as far as Perth. The romances of Sir Walter Scott seemed always familiar as did most of the great poets. He learned to copy drawings as a child, but his "blinkers and bridles" necessarily prevented original drawings. He kept a diary from the age of 7, chiefly in verse. Diaries were a great fashion with children and adolescent even late in the 50s of the nineteenth century. At 10 he gave his father

"Waterloo," a play in two acts with other small poems. In the last the usual platitudinosity of the juvenile prig appears:

The touch of man
Raised pigmy mountains, but gigantic tombs
The touch of Nature raised the mountain's brow.

At 6 he had gone to Paris, Brussels and Waterloo. At 14 he went through Flanders, along the Rhine, through the Black Forest to Switzerland, where he imbibed his passion for the Alps. His education, ere his entrance into Oxford with the rather vague scholarship of a gentleman commoner, had been very desultory and irregular. His family had, as Harrison excellently puts it, practiced an *egoisme-a-trois* as if it were a law of God and man. He was a very delicate child with an unstable autotoxic constitution. At 8 he had a severe fever of autotoxic origin. At 16 intercostal neuralgia was regarded as pleurisy. At 21 hemoptysis occurred. He never learned games, never attempted to dance and failed to learn to ride. He was, however, a very good walker. There were recurrent neuropathic symptoms from time to time.

His paternal aunt married a tanner, by whom she had five children, who died early, of various joint, meningeal and other forms of tuberculosis. The aunt, who died of a decline, seems to have been of the *erethetic tuberculosis* type of De Giovanni. This as a rule presents a clear complexion, fine skin, features well cut and often beautiful. Jessie, whom Ruskin proposed at seven to make his wife, was like her, of this type. She died at 8 of "water on the brain," a term then including meningeal tuberculosis. The aunt had occult tendencies of the "second sight" variety. The uncle died of apoplexy. At 14 a trip was made through Calais to Cologne then to Strasburg, the Black Forest, Switzerland, Milan and Genoa. Ruskin produced on this journey thirty-five sheets of small pen and India ink drawings. He began a rhymed history of the tour in imitation of Roger's "Italy." He spent a couple of years over this drawing vignettes in imitation of Turners, recopying text, etc. He was sent to a private school, where he seems regarded as effeminate and treated accordingly. There was obviously an absence of the usual sexual curiosity

at this period, since the boys regarded him as an innocent. That Ruskin had an abnormality of the sexual organs appears evident in the marriage annulment testimony. He, however, at 9 found girls different from and more agreeable than boys, but this was while premature rather normal. How much his desultory yet severe education tended to dwarf and retard his sexual appetite cannot be determined. He glides suggestively yet vaguely over these questions and here his autobiographic frankness becomes a pose.

(TO BE CONTINUED.)

A FORECAST OF THE EVOLUTIONS AND REVOLUTIONS IN MEDICAL EDUCATION.

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THE present transitional movements to raise the standards of medical education are so involved with confused theories, based on tradition, credulity and dogmatic conceptions, that when seen from a higher point of view they give a very different impression.

Already it is possible to forecast the significance of these efforts and their direction and practical materialization in the near future. Thinking men realize that much of the educational work of to-day is far behind the requirements of the progress of science and civilization.

Notwithstanding the palatial equipments and endowments of universities, colleges and schools, and the extension of educational efforts among the common people, there is a very wide gap between the present attainments and the possibilities and realities of practical training, called for by every advance of science.

This is very prominent in a review of the present condition of medical education. The new discoveries in medicine and the new conceptions of their scientific application in practical life has created intense interest and concentrated efforts along special lines, out of all proportion to, and to the neglect of, other equally important branches of medicine.

Hospitals and laboratories have come into service with the particular purpose of developing new fields of surgery, bacteriology, organic chemistry and instrumental research, and the idea has been pressed that these are the highest ideals of medical work.

Every new fact is regarded as a final one and every new

theory founded on data gathered in these fields is considered advanced work. Thus specialism, pressing on into the unknown, has set up standards and assumed a completeness of knowledge of the entire field and arrogated to itself a leadership and superiority that is at least startling.

The great leading colleges of to-day make these subjects paramount to all others and divide and sub-divide the whole range of medicine, until in some instances, from 25 to 30 different phases are made the subjects of special instruction.

The student is supposed in four years to be thoroughly trained in all these branches, but literally, he is over trained. The variety and minuteness of these various topics produce confusion and surfeit, with bewilderment of the mind and a species of psychasthenia and incapacity to practically understand the meaning and significance of the facts that are taught.

The plans and methods of teaching in colleges of all degrees, are along traditional paths and scholastic lines which reduce the topics to some mechanical level, pressing them into a machine-like standard of uniformity. In this there is skepticism, credulity and childish egotism, with dogmatic conceptions, and the student finds in actual life, that he has to unlearn and put aside many of the theories and conceptions supposed to be accurate.

In reality the diploma is not conclusive evidence of his scientific training.

The state examining boards, composed of physicians appointed through political influence, are distinct evidence of the failures of medical colleges to turn out practical physicians.

The A. M. A. Council on medical education with an instinctive recognition of the absurdity of having an independent board to determine the qualifications of medical men, based on the answers to formal questions, has sought to divide up the colleges and force them to higher levels of training.

The Carnegie Pension Board took up this matter of pointing out the faults of medical schools and labeling them according to some fixed theories of capacity and efficiency.

This effort so warmly welcomed at first, on the supposition that it would break up the weak colleges and strengthen

the larger ones, instead of being practical and evolutionary, promises unexpected revolutions and changes.

The weakness and defects of the smaller colleges have come into prominence, and the dogmatism, scholastic stupidity and faults of the larger schools loom up in startling proportions.

The failures of small colleges can be corrected or eradicated, but the great endowed universities with their traditional training, machine-like processes, leveling everything to certain fixed plans and rules, regardless of the requirements of scientific advance, present obstacles and conditions difficult to overcome.

The requirements for admission are faulty to a startling degree. The college training, covering an enormous field of topics, develops a parrot-like culture, dependent on the memory. With no particular starting point, the subject is often carried into the highest research fields possible, collecting a mass of facts and theories, difficult to understand and almost impossible to make practical.

The man comes out literally untrained and uncultured, except in the most visionary, superficial way. Then a political board presents a series of questions, the answers of which will determine his fitness for the field of practical medicine.

Then comes the disillusioning process with its loss of time, energy and failures to understand the reality and make it fit the theories learned. Thus the diagnosis, the practice, the therapeutics and the surgery of the pauper hospital varies widely from private practice.

The theories so confidently stated fail in actual experience. The boundaries and indicated lines of practical work, taught in the colleges, have to be relearned and marked over again.

The literary as well as the medical colleges, develop egoism more prominently than any other faculty. The diploma is supposed to be evidence of superiority and the graduate compares himself with others and concludes that farther effort is useless.

This surfeit of knowledge is fatal to all ambition for farther study. The requirements of a literary degree, instead of developing a student instinct, frequently bring with it false

conceptions of life, perversions and weaknesses that are fatal to future development.

The trade school and machine shop theories of literature and even of medicine, dwarf and suppress the highest kind of efficiency and training. The very duties and responsibilities called for in professional work are untaught and in their place appear ideals of greed and gain, personal advancement and efforts to turn their professional work into commercial channels.

In this way the so-called medical training of the highest schools is defective and fails to make students and leaves a certain glamor of culture that is never evolutionary.

The small college escapes this danger. Instead of surfeiting the student it starves him and often creates an intense desire for growth and development. There is with this a consciousness of poverty and weakness that makes the student a struggling pioneer in actual life, and often raises him to a higher level of attainment, than the graduate of the larger college.

In reality, the requirements of medical training are becoming more and more intense every day. To meet these there must be a degree of physical vigor and mental activity, with receptivity of mind and a degree of humility concerning the great work to be done, compared with the small amount already accomplished.

The physician must exemplify in his own work and living an ideal health or he cannot practically direct the efforts to secure it in others. His life must be on the highest level of physical and mental health and all his previous training and culture must be in this direction.

Without this he cannot point out clearly the road to longevity, and the means of avoiding disease and the measures required for the highest physical development.

The Government has recognized this fact and demands that all students to be educated at West Point and Annapolis must possess a degree of physical perfection and natural vigor before the real training begins. In reality the work of the Army and Navy is far below that of the physician in intellectual activity and practical results for the welfare of the race.

The medical man should be trained to discover the laws

of life, health and longevity, the etiology and prophylaxis of disease, and the relief of pain and suffering; and in this way the great evolutionary march of the race is promoted.

If the Government service requires a high degree of physical perfection, of persons trained to do their work, how much more important it is to have physical perfection for the work of medical men.

This fact is not recognized. Anyone with any possible motive can take up the study of medicine and become a physician, just as he can learn a trade, enter into business or engage in any of the activities of the world.

All they have to do is secure a degree from a literary college or a high school. Then enter the medical school, answer the questions, pass the examining boards, either buying his way through by the help of others, or developing a phonographic memory that will answer questions and meet the requirements of examining boards.

To-day the halt, the lame, the blind and all degrees of mental and physical feebleness are no obstacles to the practice of medicine. The student may be a moral paretic, a paranoiac or a degenerate, feeble-minded in many ways, or an epileptic and pass the traditional requirements and become a physician.

The Government refuses to train anyone who is defective physically or mentally.

As a result the graduates of their schools represent the highest type and development of culture for their work. In medicine it is just the opposite. Physical conditions are unrecognized.

Schools and colleges still retain the medieval traditions that mental training can overcome all the physical disabilities and weaknesses of life. This is very startling in the result of theological training and the large number of defectives and incapables who pass through all the schools, and become teachers and preachers, are really examples of educational failures.

One of the most startling and pathological evidences of the failure of medical education to-day, is seen in the high mortality of the physicians. The real work of perpetuating life, for which their training should have prepared them, has been a profound failure in their own lives.

It is still more pathetic to see physicians suffering from diseases which their every day life and thought should have taught them to avoid. Their life work has been disastrous, personally. The culture which should have taught them how to lengthen life and prevent disease has not been applied in their own life.

The teachings and studies they are supposed to have mastered, have not been practically learned. All their literary training, scientific skill and efficiency in the mastery of causes and conditions of disease has been unreal and impractical.

The attempted explanation of this failure, as due to pressure, strain of surroundings, conditions and exposure, brings into greater prominence the defective training and profound ignorance of the practical facts and their application in scientific living.

There is no evolution in medical colleges by setting up standards and degrees of culture and erecting elaborate hospitals and laboratory buildings, and insisting that all students who enter must have some scholastic training and knowledge of the dead languages. The real science of medicine is not developed in this direction. All this is superficial and utterly fails to bring out knowledge essential to make the real physician called for in the future.

It is revolutionary to try and drive out weak colleges, and it is equally revolutionary to try and concentrate medical training along the present defective levels of the demands and requirements of the age.

The real evolutionary movement must begin farther back and insist that every person who wishes to go into medicine should have certificates, or pass boards that will determine their physical vigor and fitness. That is the first qualification for the study and practice of medicine. No one should be permitted to study the great questions of health and life with a view of teaching others unless they can bring a health standard approximating perfection with promise of exemplifying and illustrating the work in their own life.

Having passed requirements of physical and mental health, they should be put in training in preliminary medical schools where the great central topics will be preparation for study

and culture of the body in its best form. These schools should make a specialty of health culture, nutrition, athletics, hygiene topics, relating to every condition of life, together with modern languages and science studies that bear on medicine.

The central purpose of these schools should be to train men how to know themselves. How to adapt themselves to the conditions of life; how to sleep, eat, exercise, think, observe and practically to become students with the best capacities of mind and body.

Here the student can be prepared to enter upon the higher training of the colleges and his instinct to learn be cultivated, and all the various outlying properties of physiological and psychological interests, concerning himself, be brought to notice. Everything taught here will have special reference to his later life.

Such preliminary schools will take up the alphabet of all the after studies and show the student how to combine and utilize the facts which will come to him from farther study. After two years or more of this training he will graduate to the medical college, and here there will be a new arrangement of topics, a new grouping of scientific work, a new utilization of clinics both medical and surgical. Every topic will have reference to the development of the student and his capacity for taking up new lines of research.

It will be, practically, a drill in the work of actual life and the studies and conditions that will come to him in practice. There will be no unlearning, no dropping of theories, but simply a development and widening of the culture he has received.

Like the West Point graduate, the work and duties of camp life will simply be a repetition of his past training.

No state boards will be needed to determine his qualifications. He will go out into life as a student and illustrate by his own living the great principles which he will be called on to teach to others.

Such men will take up the practice of medicine as scientists and their value and usefulness will not require any long waiting period or plans and schemes to secure practice. They will be recognized as trained men of usefulness and value and their services brought into requisition at once.

Theories as to special schools of medicine will disappear when these preliminary training schools come in. If the individual is properly trained to investigate and understand the principles of science, there will be only one school of medicine and one road for the development of the capacity of the body and brain to become actual teachers and leaders.

The revolutionary struggles and efforts to secure a higher medical training should not be confined to medical colleges, but should extend back to the man and the student. The preliminary training of the student, if along practical lines of development and personal efficiency, will require a college whose training will carry on the work begun here.

The present preparatory training in literary colleges and high schools is satisfied with the mechanical college work offered in the small, defective schools and the great confusing universities. This perpetuates the faults and weaknesses of the preliminary preparation.

Boys from the farms, stores and shops with a degree or certificate from a high school, go through the colleges of all grades and start out heavily handicapped. Literally they have to begin in actual practice to become physicians. Their training has given them little assistance. No wonder they develop commercial instincts, political and social ambitions and pass through life untrained and undeveloped.

Life is a continuous failure and a series of blunders to develop the highest personal efficiency to lengthen their own existence, prevent disease and increase happiness and their efforts to teach these facts to others, is often a reflection of their own weakness.

The real evolutionary work should be concentrated on preliminary schools and preliminary training.

The age calls for practical men, students, studying the realities of the present, and trained personally and physically to understand modern science and modern evolutionary work and their relations to life.

Training of this kind will not develop egotists or boastful dogmatic workers, or jarring schools of conflicting theories, or trust combinations concentrating all the scholastic teaching in a few centers.

It will develop scholars, reasonable, rational, earnest thinkers and workers whose work will begin in themselves and extend to all in their circle. The possibilities and advantages from personally trained men in medicine, widen in every direction.

A new type of medical men is coming and a new class of research work and a new and broadened range of culture calls for greater effort to meet the demands of each new scientific advance.

New fields of medical practice are looming up on the horizon, invested with credulity and quackery, that must be occupied by the coming man; fields of preventive medicine, of psychical therapeutics and electrical modalities, and a vast range of means and measures that are intimately associated with disease, longevity and the development of a higher form of life.

The boasted advances of medicine to-day are insignificant compared with the possibilities of future research and discoveries. It is in this direction that modern medicine is calling for a higher type of men, with special personal training to carry on the work of a newer and better life, freer from disease, with a more perfect realization of all its capacities.

The present efforts and struggles must begin from a different point of view above the scholastic and traditional requirements of to-day.

FORENSIC ASPECTS OF FRIGHT CAUSED TRAUMATISM.*

A Study of the Newmiller Case.

BY JAS. G. KIERNAN, M. D.,
Chicago.

THE relations of fright etiology have been extensively discussed by the courts and the usual self-contradictory decision rendered thereon. In a case in England where a woman jumped from a car when a controller exploded to avoid danger, the court held the company responsible since the plaintiff acted in self defense and her fear as to danger was a reasonable one. In a similar case in Chicago the same position was taken by the lower court and sustained both by the appellate and state supreme courts.¹

The plaintiff had sustained injuries which resulted in petit mal attacks and grave neurasthenia. There were on examination by me very brief attacks of stupor; the motor symptoms were very slight, not as a rule amounting to more than great pupillar mobility (chorea iris.) In this case, in which I was called by C. Helmer Johnson, the previous history was excellent and the petit mal did not develop until about six months after the injury. The case as given by the Supreme Court reports is as follows:

This is an action on the case brought by Inga Newmiller, against the Chicago Union Traction Company, to recover damages for personal injuries alleged to have been sustained by her while a passenger upon one of its cars.

The original declaration alleges that on April 29, 1902, the defendant received the plaintiff on one of its east-bound

*Read before the Chicago Academy of Medicine, Sept. 15, 1911.

¹ Chicago Union Traction Company vs. Newmiller, Ill. Supreme Court Reports, 1905.

electric Lake street cars as a passenger, and that while she was in the exercise of ordinary care for her own safety a fuse exploded, causing a loud report and a large amount of flame and smoke on said car, caused by the recklessness and negligence of the defendant, which explosion, flame and smoke produced a panic among the passengers, by reason of which they made a rush for the rear door and platform, whereby the plaintiff was pushed and thrown from the car and was injured. An additional count alleged that while the plaintiff was a passenger on said car and was exercising ordinary care for her own safety an explosion occurred, caused by the negligence of the defendant, thereby causing a loud report and a large amount of flame and smoke in said car, which explosion, flame and smoke produced a panic among the passengers, by reason of which they made a rush for the rear door and platform, whereby the plaintiff was pushed and thrown from the car and injured. The defendant filed a plea of not guilty and the trial was by jury.

The accident on account of which this suit was brought occurred April 29, 1902, about one o'clock in the afternoon. The car in question was a Lake street electric car east-bound, and the accident occurred while the car was crossing Garfield Park. It was a long, closed car, with seats running lengthwise, and the plaintiff, a young woman about twenty-five years of age, sat at the extreme rear end on the left-hand side. There were twenty to thirty-five other passengers in the car. The controller was located on the front platform, close to the dash-board. While running at the rate of six or seven miles an hour there was a sudden flash and noise from the controller, and flames shot out of it to a height of five or six feet. The noise of the explosion was compared by one witness to the report of a shot-gun and by another to the explosion of a fire-cracker. The passengers rushed out of the car onto the rear platform, and the plaintiff, who was also endeavoring to get out, was pushed off and fell to the pavement. Her injuries consisted of two broken ribs and other injuries which confined her to her bed for about a month. She also claimed that the accident caused her a severe nervous shock, which has resulted in epileptic fits. Upon a hearing

judgment was rendered in her favor for \$4500, which has been affirmed by the Appellate Court, and a further appeal has been prosecuted to this court.

Justice Wilkin delivered the opinion of the Supreme Court: It is insisted by appellant as grounds of reversal that the evidence is wholly insufficient to support the verdict; that the declaration is insufficient; that there is a variance between the allegations of the declaration and the proof; that the doctrine of sudden peril was improperly applied in the trial of the case, and that the court erred in giving and refusing instructions.

As has been held in many cases, the Supreme Court has nothing to do with the controverted facts of the case or whether the verdict is supported by the weight of the evidence. The judgment of the Appellate Court is conclusive of these questions.

At the close of all the evidence there was a written motion by appellant to exclude the evidence from the jury and to instruct the jury to find for the defendant, which was overruled by the court. On what particular grounds the motion was urged does not appear from the abstract, but in its consideration we are limited to the one question whether there was evidence fairly tending to support the verdict. It is not denied that appellant was rightfully a passenger on the defendant's car. As shown by the foregoing statement, she occupied a seat at the extreme rear on the left-hand side, and there can be no pretense that she was not in the exercise of due care for her own safety at the time of the explosion. While in this position the explosion occurred in the controller on the front end of the car. The controller was a part of the machinery used in operating the car, and it was in the possession and under the control of the appellant. It is clear that the explosion and flames caused a panic among the passengers, which resulted in the injury. All of these facts are clearly proven by the evidence. As to the explosion being the result of the negligence of appellant, while, as a general rule, negligence is not to be presumed, there are well understood cases where the circumstances of the accident afford sufficient *prima facie* evidence of negligence. We think the case at bar falls fairly

within the maxim *res ipsa loquitur*. Where an injury occurs to a person who is a passenger, in the exercise of ordinary care, upon the car of a common carrier, by some defect in the machinery wholly under the control of the carrier, a *prima facie* case of negligence on the part of the carrier is established, and the burden of proof is upon it to show that the accident was without its fault.¹

The facts proved made a *prima facie* case of negligence against the appellant and were clearly sufficient to support the verdict, and therefore justified the court in over-ruling the motion to take the case from the jury. The question as to whether this *prima facie* case was rebutted by the appellant's evidence was one for the jury. If there was a material variance between the declaration and the evidence, (which we are unable to discover,) it was the duty of the appellant to call the attention of the court to it, either by objections to the evidence or a motion to exclude the same when the variance became apparent, or in some other way. Such an objection, when raised as a question of law in this court, must have been presented to the trial court and a ruling upon it which this court can review.²

We find nothing in the abstract of the record showing that the question was presented to the trial court. If it had been, the variance could doubtless have been removed by the introduction of other testimony or an amendment of the declaration.

It is again insisted that the declaration is defective in that it does not allege that appellee was injured by the explosion or in endeavoring to escape from danger apprehended by her from the explosion, but that she was injured by the passengers in rushing out of the car, there being no negligence shown or alleged against appellant in receiving the other passengers or in failing to restrain them; also, that the evidence shows that appellee jumped or fell from the car, and

1 Hart v. Washington Park Club, 157 Ill. 9; Chicago City Railway Co. v. Rood, 163 id. 477; New York, Chicago and St. Louis Railroad Co. v. Blumenthal, 160 id. 40; Toledo, Wabash and Western Railway Co. v. Moore, 77 id. 217; Illinois Central Railroad Co. v. Phillips, 49 id. 234; North Chicago Street Railway Co. v. Cotton, 140 id. 486; Galena and Chicago Union Railroad Co. v. Yarwood, 15 id. 468.

2 Libby, McNeil & Libby v. Scherman, 146 Ill. 540; Harris v. Shebek, 151 id. 287; Chicago and Northwestern Railway Co. v. Gillison, 173 id. 264.

that she was not pushed or thrown therefrom. We do not consider either contention tenable. The declaration avers that the injury was the result of the explosion; that it created a panic among the passengers, causing them to rush to the rear door, appellee among them, and in the excitement she was pushed from the car onto the pavement and received the injury. These allegations were clearly sufficient to sustain the plaintiff's action, especially after plea and verdict, and the evidence fairly tends to sustain the declaration.

Complaint is further made of the giving of the first instruction on behalf of appellee, as follows:

"The court instructs the jury that if a person, without fault on her part, is confronted with sudden danger or apparent sudden danger, the obligation resting upon her to exercise ordinary care for her own safety does not require her to act with the same deliberation and foresight which might be required under ordinary circumstances."

It is said the instruction states an abstract proposition of law, and that it omits the qualification that the danger must have been such as to be apparent to a person of reasonable prudence. There was certainly sufficient evidence upon which to base it, and thus remove the objection that it was a mere abstract proposition of law not applicable to the facts of the case; and it is also apparent, from the evidence as to the action of the other passengers at the time, that there was sudden and apparent danger of fire to a person of ordinary prudence. There was no error in giving the first instruction.

The fourth instruction given on behalf of appellee is also urged as error. It is as follows:

"The court instructs the jury that if you believe and find, from the evidence, that the plaintiff was a passenger on one of defendant's cars, and while such passenger she was in the exercise of ordinary care for her own safety, an explosion occurred on said car, by reason of which a panic was caused among the passengers in said car, in consequence of which the plaintiff, without fault on her part, was pushed from said car and thereby injured, then the plaintiff has made out a *prima facie* case of negligence against the defendant, and this places upon the defendant the burden of rebutting that pre-

sumption by proving that the explosion could not have been prevented by all that human care, vigilance and foresight could reasonably do, consistent with the mode of conveyance and the practical operation of the road."

It is insisted that this instruction is fatally defective in that it fails to inform the jury that in order to entitle plaintiff to recover she must have shown not only that an explosion occurred, but that such explosion was caused by some negligence on the part of the defendant. In accordance with the authorities already cited, the explosion of a part of the machinery under the control of appellant, injuring appellee in the exercise of reasonable care for her own safety, was *prima facie* evidence of negligence on the part of appellant. What has been said with reference to the evidence of negligence on the part of the defendant, and the decisions cited, are equally applicable here. We are of the opinion that the instruction announced correct rules of law applicable to the case, and is not defective in the particular pointed out by counsel for appellant.

Nor do we think it was error to refuse the fifth instruction asked on behalf of appellant. It was as follows:

"The court instructs the jury that under the allegations contained in the declaration in this case they cannot find the defendant guilty unless they believe, from a preponderance of the evidence in the case, that the plaintiff was in fact pushed and thrown from said car to and upon the street, in manner and form as charged in the declaration."

The ground upon which it is insisted it should have been given is, that there was evidence tending to show that appellee fell or jumped from the car. The sixth instruction given at the request of the appellant told the jury that the allegation that the appellee was pushed and thrown from the car and injured was a material allegation of plaintiff's declaration, and that she must prove said allegation by a preponderance of the evidence or she could not recover. To the same effect was the thirteenth instruction given on behalf of the appellant. These instructions contained the same point sought to be presented by the fifth. The court was not called

upon to repeat its instructions to the jury. On the contrary, it was its duty to avoid doing so.

We have given this record such consideration as the importance of the case demands, and are of the opinion no reversible error has intervened.—*Judgment affirmed.*

It is obvious that in essence the psychology which controls courts in decisions as to self-defense in criminal cases was followed here in self-defense against accident. In criminal cases, however, the self-defense pleas would merely require the raising of a reasonable doubt, whereas in accident cases it would necessitate the application of the preponderance of evidence principle.

NOTES ON THE HISTORY OF PSYCHIATRY.—V.

By SMITH ELY JELLIFFE, M. D., Ph.D.,

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(Continued from Page 490.)

THE present communication contains a further installment of Falk's Study in the Psychiatry of the Ancients. It completes Hippocrates, Plato and Aristotle.

"How does the brain become sick? How does insanity originate?"

In *περι αερων, υδατων, τοπων* and *περι ιερης νοουσον*, he combats with particular emphasis the belief, held by the people, also perhaps in opposition to his teachers and predecessors, (although in one of his earlier writings, *Prognostics*,¹ he permits the will of the gods alone an influence) that any disease, one more than another, had any Godlike cause, also not those disturbances of the soul due to anomalies of the brain.

According to the Hippocratic view, which in *περι φυσιος ανθρωπον* and in *περι διαιτης*, 35, is especially detailed, there are four juices, which are the principal mediators of all normal and morbid occurrences in the human organ; these are blood, mucous, yellow and black bile; for the normal working of the functions an exact mixture is necessary. Disturbances of equilibrium of the same causes different diseases. Injurious influences upon the brain cause psychic afflictions and in this manner; that the bile, when it goes from the body through the

* Page 449 in original in *Allg. Zeitschrift f. Psychiatrie*, Vol. 23, 1866.

¹ That is Littre comes to this conclusion because it is said in *Prognostics* an undoubtedly true work, *Oti denon enestin entesi noudoisi*. In other books this sentence is combated; therefore, the *Prognostics* is to be regarded as one of the earlier works of Hippocrates.]

blood carrying veins (φελβας αιματος) towards the brain makes this organ hot and makes the patient restless, noisy, violent; in short, delirious. The mucous, on the contrary, is cooling and brings about a morbid anxiety and sadness. On the other hand we also find the theory of a definite relation between fire and water, moisture and dryness, in the organism, which are said to be necessary for physical and mental good health. Definite changes of these qualities result in certain characteristic peculiarities, as for instance, imbecility is said to be due to a considerable predominance of water.

When Haeser² notes that Hippocrates has set forth as the standard for physicians, to strive with all their intellect and greatest exactness to find definite knowledge by frequent experiences and not to omit to supply the gaps by reflection, so the father of medicine has made free use of this freedom, especially in the doctrines concerning the origins of insanity. Yet even we have not advanced very far in the etiology of many diseases from the hypothesis of these earlier times.

So far as individual predisposing causes of the psychoses are concerned the connection between epilepsy and insanity was known to Hippocrates [μελαγχολικοι και επιληπτικοι ειωδασι χενεσφαι ως επι το πουλυ' και οι επιληπτικοι μελαγχολικοι.] [1. Επιδημιοι. Sect. VIII.] If the disease creeps (ρεπει) upon the body, it causes epilepsy, if upon the mind, insanity. Both diseases occur most frequently in the springtime and also during a dry autumn.³

Mental disease grows worse less often in the cold weather, but much more so in warm seasons, whereby as a proof of growing worse the removal to an institution is looked upon. Furthermore, Hippocrates calls attention to the frequent complications of mental diseases with convulsions and of the unfavorable prognosis of such a combination.

των εξισταμενων μελαγχολικως οις τρομοι επιγιγονται κακον (Κωακ., προγν. I, 92.)

When Morel (op. citat, p. 6), calls attention to the words of a Pythagorean, Timon of Locris: "Our tendencies to vir-

² Geschichte der Medizin, Bd. I., p. 49.

³ For comparison only it may be permitted to refer to the results of Zillner (Über die psychische Jahreszeit. Constitution. Zeitsch. f. Psychiatrie, Tom. V.)

tues and to vice, to health and to illnesses, originate from our parents;" and also points out the place in *περι ιερης νονον*: "all diseases arise *κατα γενος*, "from inheritance," from this alone it is not certain, as Morel states, that Hippocrates already placed great weight upon heredity. To no one earlier than Morel himself are we indebted for the cultivation of this idea, and for its importance in the etiology of insanity as well as for the wonderful placing of single forms in their proper light.

Phrenitis is not the only mental disease which can result from febrile diseases. If such appear in the course of a high fever, the original symptoms of the same disappear. *τα μανικα πυρετους οζεις παρακωδεας ακολω και κορδιαλγικω λνονσιν*. Κωακ προγν. XI, 539.

Mental disease is also observed following intermittent fever. In *Επιδημ. VII, 45*, it is related of one Mnesianax, who at first was attacked by an ophthalmia, afterwards a quartian fever set in; a continuous diarrhoea and formation of a rectal fistula delayed the recovery, when the patient had a sudden attack of dizziness and unconsciousness, out of which he awoke slowly, but suffered for a long time from a marked hypochondriac—melancholic mental disturbance. Here we have, therefore, a case of insanity following malaria, long before Sydenham, who expressed surprise (2 Opera omnia, V. 3) that earlier authors mentioned nothing of the connection in these processes. Sydenham certainly deserves the praise after having observed several similar cases of calling attention to the causal relationship of both affections. He also recognized anaemia as a cause of insanity. That Hippocrates only occasionally mentions a case belonging to this category cannot lessen the value of his observations, since he generally noted only such cases, which were of special interest to him. Anyway the patient of Hippocrates recovered after bleeding and catharsis, which procedure the English physician feared would result in dementia.

In *Επιδημ. VII, 3*, the case of a patient attacked by dysentery is reported. The condition ran a long course with diarrhoea, colics and loss of appetite, which exhausted the patient very seriously with the appearance of a remarkable psychical state. The patient asks for something and in a

short time after repeats the same question as if he had not done it before; when he is seated upon (καθεζομενος) the comode, he forgets to get up and has to be reminded. He himself was conscious of this mental anomaly. His mental and physical state recovered after 70 days. His helplessness following his tormenting, painful illness, required good nourishment.

The cause of such a "confusion" is certainly to be looked for in the marked anaemia of the patient.

Further in *Επιθμ.* a case of puerperal insanity is recorded. A woman, who had lived in a damp room and who was ailing in her pregnancy, on the third day after the birth of a daughter had a severe diarrhoea and a furious delirium. She recovered, but became peevish, quiet, anxious, melancholic and finally would not speak at all. She died on the 80th day, after shortly before her death regaining her speech and her anxiety had somewhat diminished.

Concerning phthisis it is said:⁴ If the expectorations cease the result is a talkative delirium (εξιοτασαι ληωδως.) This seems to correspond with the statement of later observers, that during an outbreak of mental disease in the later stages of tuberculosis some of the more important symptoms disappear,⁵ but the explanation given by Hippocrates is that the suppression of the expectoration is an etiological factor in the psychosis, is not admissible.

Hippocrates was also the first to call attention to the harmful influences of suppression of the hemorrhoidal flow. Toxic causes for mental disease are also mentioned. One is obliged to give mandragora to certain patients, ελασσον η ως μαινεσθαι;⁶ veratum also in similar instances.⁷

Warmth, especially the free use of hot water, also acts as a narcotic to the nerves causing effeminacy as well.⁸

4 [Koax prognos. II 21,429].

5 Griesinger, *Die Pathologie und Therapie der psychischen Krankheiten*, p. 188.

6 *Peri topon.* 39.

7 *Epistol.* An acute intoxication is meant in both instances.

8 *Aphorism*, V, 16 and *Peri organ chreios*. Heat (hot water) produces the following bad effects on those who use it frequently: Enervation of the fleshy parts, impotence, *corpore* of the understanding, haemorrhages, deliqua and along with these death.

Amenorrhea is a causal factor, (1. *περι παρηνιων*) the blood gathers in the womb, which swells up and presses upon the diaphragm and heart, and this, the seat of the mind, is hindered in its functions and thus insanity must arise. That one should find here in a document of the school of Cos the hypothesis of Aristoteles, that the heart is the seat of the intellectual faculty, is very striking. Perhaps this fact alone speaks for a later origin of the book than has been commonly held.

Great loss of blood may also finally lead to mental disturbances, especially in connection with convulsions in which the prognosis is bad.⁹

It is strange that Hippocrates in his teachings on injuries to the head, concerning which he wrote a special volume, does not mention the importance of such injuries as cause for acute and chronic mental diseases. In Aphorism d. alone he speaks of a stupor or a delirium immediately following a trauma, (*εκπληξις*) (*παράφροσυνη*.) Such symptoms, under such circumstances, according to Hippocrates, are very unfavorable.

Finally I shall not pass in silence that old age inclined not only to paralysis and to blindness, but to mental diseases as well.¹⁰

Truly psychical causes are not mentioned, and the place cited by Nasse,¹¹ as the author himself admits, permits a different interpretation and also in *περι φυσων*, where changes of habit are causes for disturbances of the mind, the somatic manner of life is referred to; namely the feeding and the bodily movements, whose change produces the harmful blood mixtures for the mind.¹²

How important, however, a healthy blood is for the normal

9 Many authors have attempted to interpret this as related to general paresis. There is no warrant for this. [S. E. J.]

10 Presbuteridi de chai odoidin ede to ermon chrateitai chai paraplehticha e manicha e steredis ophda leon. epid. When Galen adds to his interpretation of this (cfr. C. G. Kuhn, *Editio Galeni*, 1828, that according to Hippocrates mania always signifies non-febrile insanity, we can hardly value this as the original opinion, certainly by no means let it pass for that of the whole collection.

11 Op. citat, p. 54.

12 In: *De morb. Sacro*. it is also written that the air which is necessary to support the brain functions can be destroyed or suppressed by these humors.

functioning of the brain, is thoroughly discussed among others in *περι φουσων*.

Therefore the therapy of Hippocrates is purely somatic. From the earliest times he had acquired the use of helleborus. This, a purge and an emetic at the same time, (often with associated narcotic action), plays a great part in the Hippocratic materia medica, and was applied to great advantages in most cases of mental disease and in all its forms. The curative value of hellebore is described with great circumstantiality and which does not seem necessary to repeat at this time. Bleeding is also frequently recommended; also cold douches are advised as they can directly affect the ailing part, the brain; for the patients who are always chilly and whose extremities are cold, warm applications are recommended.¹³

Melancholiacs, with suicidal ideas, should use mandragora root. Hippocrates strongly recommended marriage for those hysterical insanities due to retention of the menses, as pregnancy relieves their sufferings, but otherwise such are worse at the time of their periods or shortly after, or the psychosis can follow still other diseases. This counsel, remarkable to state, has maintained itself up to the present time among physicians and the masses, although not universally valued.

In psychiatry, as in Hippocratic medicine throughout, diet plays an important role. In depression and in exaltation it should be non-irritating. Only cold and mildly laxative food is allowed; salty, oily and sweet food is to be avoided. The use of donkey's milk is especially advisable. The body must rest, therefore, there should be either no outdoor gymnastics or only in moderation. Great precaution should be taken in recommending great freedom and substantial food. Every *ηλοδιοι* (feeble-minded) should be kept on a restricted diet, but the body should be hardened by active exercise and gymnastics. By such conduct the individual is later able to recover from the disease. By frequent emptying of the stomach by emetics one can gradually introduce a richer diet which will make the body healthier and make it more useful. In every

¹³ All of these remedies are, of course, used in phrenitis, which is due to black bile to a sudden heating of the brain. It is, therefore, analogous to the chronic insanity, *melancholichoi peri noutron*. lib. I.

individual predisposed to insanity the relation of the water to fire elements in the body is to be kept in order by means of a drier or more liquid diet, and recovery to be expected along these lines. Much success, however, is not to be expected.¹⁴

Hippocrates considers it a sign of cure of mental diseases, when the patient commences to sleep well, or when the hemorrhoidal flow commences. Intercurrent diseases may also act upon the course of mental disturbances. [In Αφρορισω VII, 5, he says *ἐπι μανιῇ ροεῖν τετελεστημένη ἢ νύκτωρ ἐκστασιζ ἀγαθόν*.

(Dysentery or dropsy, or ecstasy coming on madness is good.)¹⁵ Galen explains that here ecstasy is to be understood as an acute increase in the intensity of the mental disease, (delirium); such, however, were advantageous just as in somatic diseases acute crises often lead to recovery.

Apart from a voluntarily chosen death, life is not seldom lost, especially in maniacal attacks. Other unfavorable endings of melancholia or mania, especially with reference to later mental activities, are not mentioned by Hippocrates.

So far as the Hippocratic collection permits let us attempt to summarize.¹⁶

The brain, the seat of the mind's activities, like all other organs, is exposed to the natural causes of illness. Mental diseases arise in consequence of abnormalities in the brain. These are chiefly due to the changes of the main juices. Apart from heredity, which is here of no more consequence than in other diseases, acute and chronic disease of different organs of the body, as well as suppression of physiological or habitual functions, lead to psychic disturbances. These arise either suddenly and remain for a long time or soon pass away. There are also individuals who are almost insane, those disposed to insanity, but still not to be called insane. Of the fully developed mental disturbances there occur phrenitis, the possible fever delirium of any acute disease, and apart from the de-

14 Peri di aiteo, lib. 63.

15 Edit. Kuhn, Vol. 17, A. 105.

16 I have not mentioned everything, as on closer view it seemed to me unessential, or quite confused, or entirely worthless for our purpose; much which at first appeared to be worth attention proved later not to belong in this place. To here illustrate every single citation is not worth while. Some of these have been discussed by Nasse, one of the younger and therefore more available students of Hippocratic psychiatry.

lirium of drinkers, forms of depression and of exaltation (according to our present-day terminology), the former ranging from groundless fears with feelings of anguish to hypochondriacal and hysterical complaints of all kinds, yes even to suicide, the latter from those of unusual well being to excessive frenzy.

Furthermore one finds feeble-minded, perhaps inherited, but we cannot see from the text whether Hippocrates includes such individuals as mentally diseased, since he nowhere gives a connected description of all forms, nor anywhere attempts a classification. We shall see later in what respect this point is of interest.

Nervous diseases, especially convulsions, when closely associated with the psychoses, are an unfavorable complication.¹⁷

Furthermore mental diseases are mostly curable, at times they are fatal.

Treatment is a somatic one, medicinal and dietetic, and one must never overlook the temperament upon which mental disease depends. In most of the cases it is melancholic which, as the name signifies, is characterized by the over abundance of black bile.¹⁸

Therefore the therapy should be eliminative during the greater part of the illness; it might be termed antiphlogistic. Hellebore, bleeding, emetics, rigorous diet, rest are the principal requisites of treatment. Against an inborn disposition to sickness and for weak constitutions a special treatment of restricted, close diet and lively bodily exercises are advised. The results are not brilliant.¹⁹

In settling the question concerning the importance of

17 I do not know how the contradictions can be solved which we find in: *epistol; apasmoi pasi toisi melagcholioisin epiginomenoi panousi tai melagcholia.*

18 After all, the melagcholia of Hippocrates corresponds more often to our mania than to melancholy; now and then it is used as a general term for insanity as in *Epidemioi VIII, 31*, furthermore such melagcholioi are inclined to different body diseases; compare Aphorism and the Galenic interpretation in *Tom. XVIII, A. 142.*

19 I am pleased in the present discussion to have arrived by independent research at results which in their essential points harmonize with those of Nasse. The *deleia nouson* of the Scythians already related by Herodotus I do not at all consider to be a mental disease with the delusion of being transformed into a woman. The opinion of Thierfelder, who considered it a form of passive pederasty, seem to me more likely, and Littré is also inclined to the same view. The reasons for their being delusions which Friedreich states in his explanation do not hold.

the Hippocratic books for the history of psychiatry, it is of secondary interest to measure what position among the different authors of the collection we have to give to Hippocrates himself, because those books which are not directly his, for the most part show the spirit of the master. It is more important and also more difficult to decide which of the psychiatric accomplishments belongs to Hippocrates and which are due to his teachers. Did he by his practical experiences only make valuable the work of his predecessors or did his genius lead him to pursue a course perhaps in an entirely opposite direction? He himself speaks of the ancients with great admiration, even when he developed a different opinion. However, in no place can we find that he is indebted to them, especially for the treatment of mental disease and for the useful hints in comprehending these diseases. And even if he has only transmitted to us fragments of the traditions of the ancients, nevertheless he always will be of importance as the first from whom we possess enduring evidence of medical experience in this field. He has always been called the Father of Medicine, because in medicine his name indicates the end of the legendary period and the dawn of history. Therefore it has seemed advisable to dwell a little longer with him and to further more fully illuminate the material obtained in his collected writings.

Hippocrates first expressed the opinion that in mental diseases the brain was the affected organ. He boldly opposed the traditions and beliefs of his contemporaries in that he asserted and proved that these, just as little as other diseases, had a transcendental origin. He made the insane, which to the mass had been objects of admiration, but perhaps also of mockery and of antipathy, the subjects of medical treatment and saved them in their own interest from the manipulation of the unauthorized whose pretensions he fearlessly yet dignifiedly exposed. Even if he expressed himself in naive hypotheses concerning the theories of mental disease, he is even less to be criticised as those had little harmful influences upon his practical treatment.

He called attention to predisposing causes, whose importance cannot be denied even at the present day, and even in part extended further. He pointed out correctly the symp-

toms of a beginning cure as produced by nature. The differentiation of the individual forms of mental disturbance shows how good a diagnostician he was, and the meaning of hallucinations was clear to him. Without doubt he had received many insane for treatment, the Abderites also went to him, on which occasion he investigated the mental state of his countrymen.²⁰

If he formed his opinions concerning the nature and etiology of insanity in the same manner as their therapy, upon a purely somatic basis, this is all the more explicable since this is in accord with the fundamental ideas and experiences of the therapy then in use. At various periods great authorities have paid their homage to him and only recently has his so-called mixed mode of treatment, varying according with the special indications of the individual, come into use, and, it is to be hoped, for some time.

In the Hippocratic *materia medica* one finds remedies, especially hydrotherapy, which have been valued at all periods. His therapy is indeed efficacious, but can be called neither immoderately weakening, nor even over-irritating. He prescribed according to the right principles in that for acute conditions and during the climax of disease for the mind, also, ordered rest of every description.

Here we leave, although unwillingly, the physician of Koss. Will the gaps, which we with our present-day knowledge think to find in his system, be filled by his successors?

Plato.—The immediately proper successors to Hippocrates, so far as their works are not included in the Hippocratic collections, offer little interest. Most of their books have been lost, and those which still exist offer no instructions for our subject. In general one perceives that their point of view concerning medical science shows the considerable influences of the natural philosophy teaching of Plato and later of Aristoteles.

Plato, who tried to obtain a profound insight into all branches of natural science, next deserves our consideration.

²⁰ The (apocryphal) correspondence between the people in this state and Hippocrates is delightful. It offers little special value to the student of medical history. It is contained in Vol. 9 of Littré's Edition.

Lichtenstaedt²¹ even remarks, "It is not to be expected that one should gain much for our present-day medical treatment from what Plato taught concerning individual diseases. The statements with reference to those occur only occasionally and were not written with that object in view.

This statement is true, perhaps, especially for the explanations which we find in the writings of Plato concerning mental destruction, notwithstanding we intend to show that one should never overlook Plato in the history of medical science and we also have to grant him attention for our present purpose, if we would not willingly lose sight of the development of psychiatry.

The psychology of Plato has often been the object of scholarly investigations and its reproduction does not belong here. I shall mention only briefly, that according to the Platonic philosophy, all living beings possess a body and a soul both of which form a whole, but which are held together and controlled by another above and apart from either. Both can be actually grasped only by considering the relation of one to the other. Ψυχης ουν asks Socrates of Phaedrus.²²

Whether it is possible rightly to understand the nature of the soul without understanding the nature of the universe.

Phaedrus agrees with him, and quoting Hippocrates replies, ονδε περὶ σωματοεανεν της μεθοδον ταυτης. "We cannot understand even the nature of the body without this method." (Phaedrus, 121.) This recognition of Hippocrates on the part of the Athenian philosopher is anyway all the more worth mentioning since in many respects they differ considerably in their opinions.

Hippocrates had tried to show that all psychical activity was a function of the brain. Contrary to this, Plato accepts three kinds of mental functions: Firstly, the divine immortal soul, νοϋς, to which the body is delivered as a vessel, its bodily seat is the brain. But another soul is planted within us, αλλο

21 Plato's *Lehren auf dem Gebiete der Naturwissenschaft und Heilkunde*. Leipzig. 1826, pg. 165.

22 Phaidros: Φυσιν αζιος λογου chatanoesai oiei dunaton einai anew tes tou olou phuseos and whether it is possible rightly to understand the nature of the soul without understanding the nature of the universe.

ειδος Ψυχης, ζήτητον δεινα και αναγκεια εν αντω παζήματα εκον, the mortal soul must not pollute the immortal soul without necessity, ον μεαινειν το ζειον τι μη πασα αναγκη. They, therefore, have been separated one from each other by the neck; the mortal soul being located in the breast and chest, τα στηθε δεα και τον καλουμενον φωρακα. But again they are separated as nearer the head; between the neck and the diaphragm the best part resides, το μετεκον της αισνομενον α νδρειας και δνηνν φιλονεικονον. The heart, supported in part by the lungs is the guard, δορυφορικη in order to make obedient to the warnings of reason everything that is susceptible to exhortation and threat in the body. πον οι αιδδητον εν τω σωσμα τι τωντε παρακελεμβ εων και απειλων γιγγοιοι επηκοον.

But between the diaphragm and the navel there resides that portion of the soul which is desirous of food and drink, in the same manner as for the nourishment of the body. φατηνη τη τον σωματος τροφη τεκτηναμενη. If the mortal body is to exist, however, it is necessary to take care of this part which is intimately connected with the body.²³

In Timaeus, Plato develops these psycho-physiological ideas here outlined and tries to make them plausible by describing the anatomical conditions; but thereby we can see in the gaps of anatomical science filled in in several places by teleological abstraction. (Compare the anatomy of Plato and of Aristotle, and also especially the Point of View on Nature of both philosophers by Philippson (υλη ανθρωπινη, Berlin, 1831.)

A symmetry between body and soul is of the greatest importance for perfect health, ονεμισυμμετρια και αιμετια ψνκης αυτης προς σωμα αυτο. (Timaeus, 87) and whoever wishes to remain strong and healthy should not consider one sphere alone for his welfare, and further he who devotes himself to mental exercise, which requires great effort of meditating, must also give justice to his bodily movements. This can be done principally by gymnastics, which Plato particularly recommends as an excellent mode of strengthening the body. On the other hand he who makes an effort to train his body

²³ Sprengel, (Op. citat.) thinks to find a certain proof of those theoretical speculations which have been made in our century to transfer individual parts of the psychical activities to parts outside of the brain, namely to the ganglionic nervous system. Since then physiology has been obliged to reject entirely this hypothesis.

should not neglect the mind which is necessary. Music, also philosophy, is recreation for the mind. Mistakes are often made about this indispensable condition for the health and thus the seeds for many bodily and mental diseases are sown. Plato teaches that occasional influences of the body, as well as psychical moments, *δια θυμου κδακη νψτσιν*, such as anger, strong desire, immoderate intoxication of the senses are direct causes of mental disorders.²⁴

He also speaks of the influences of the humors: "When the acid and salty phlegms which travel through the body, like corrosive and bilious juices, find no outlet but go on circulating in the inside, causing a mingling with the movement of the soul and mixing with its transpirations, then mild or severe, occasional or frequent diseases of the mind are brought about."²⁵

According as these juices go to the different places of psychical activity they call forth various anomalies of mental functions. The author does not go more into details concerning this point, but we are led to the question as to what different kinds of mental disturbances, insanities, are mentioned by Plato.

Frequently we find the expression *μανια*. It stands in many cases as a general term for insanity.²⁶

In Phaedrus he distinguishes two kinds of *μανια*. One of them arises in *υπο δειας εξαλλογης των ειωδοτων νομιων*, through a divine removal out of the customary, lawful condition. No doubt one has here to consider the influence of four divinities. Dionysius is said to bring about religious insanity, [*μανια τελεστικη* is thus translated by Schleiermacher.] The Muses are responsible for the insanity of poetry. Aphrodite and Eros, the insanity of love, *ερωτοκη μανια*, *αριση*, but above all Apollo inspires to the insanity of prophecy. This gift of prophecy which mortal souls may have under certain

24 Joy and grief, but also mental exertion, as required by occupation in affairs of state, are likewise hurtful.

25 Ibid.

26 We also find as signifying the same the following words: *chechinemenoi*, *parochinon*, *paranoia*, *noseein*. When Lichtenstaedt (op. citat. page 166), explains the etymology of the different termini and compares them with those of other languages, he among others calls attention to the fact that in Plato at first *nosein* corresponded to the Latin *insanire* "to be ill." This also signified "to be mentally ill."

circumstances, is a sweet delusion, therefore Plato explains also in Phaedrus, *τα μεσιγα των αγαδων ημιν γιγνεται δια μανιας, δεια μεντοι δοσει διδομενης*. He also calls attention to the etymological connection of *μανια* and *μαντικη* and believes that the ancients did not consider madness as something terrible, as they have given the same name to the noble art of prophecy and only present usage has made two different words out of it.²⁷

All of these conditions which present-day views ally with difficulty to insanity, (even when we are willing to explain with Morel the rapture of Pythia, as a hysterical ecstasy) as already remarked have a divine origin.²⁸

The mania, however, which develops into *υπο νοσηματων ανθρωπινων* is besides the *αμαδια*, a form of our insanity proper, *ανοια*. In this sense *μανια* corresponds with our frenzy, (active delirium); this seems to be evident from the statement: "Raving people [*μαινομενος*] ought not to appear in public, but should be kept at home if possible by their relatives." Further treatment for the patient is not mentioned by the author. I shall remark here at once that we search in vain to find any indication from him relative to the treatment of mental diseases proper. We cannot learn as in other diseases, for instance, that he values medicine above diet. According to Plato the best protection against the outbreak of insanity is a suitable mode of living which, as already referred to, consists in the orderly development of physical strength with the education of the mental faculties.

As a second form of *ανοια* one finds *αμαδια*. In the avail-

²⁷ Mania, madness; manike, the mind act; and mantiche, the prophetic act. Cary, Fr. Plato. Phaedrus. Bohn, p. 320.

²⁸ I cannot understand why Michea (*Les doctrines psycho-physiologiques condee chez les anciens*, Annal. med. psycholog. 1843, I.) could distinguish monomania in its modern sense from Plato's words. In the third variety of mania he recognized Erotomania. That Plato from this supposition has described mania, *upo tou erotos as ariste mania* is not evident. Here are the literal words of Michea about mania *telestiche*: C'est la monomanie du desordre des actions qui consistait a pousser de cris, a agiter des bras, a marcher en cadence au son des instrument, sorte de folie tres-rare de nos jours, assez frequente autrefois, surtout en Sicile, ou on la croyait determinee par la morsure d'un insecte nomme Tarantule! Why such a far fetched analogy? No author describes to us any such disease supposed at that time to be of frequent occurrence. According to Hecker (*Die grossen Volkskrankheiten*, published by Prof. Dr. Hirsch, 1865, p. 164,) our first information concerning hysterical dancing dated from the 15th century. Here as in other places mania is by no means a form of insanity. And so Plato as well as other philosophers have not distinguished these afflictions from the mental diseases proper, sometimes calling the former mania. Horace, for instance, designates in his Satyr, Lib. II, 3, the various kinds of weakness and foolishness as insanities. See in this connection, Jelliffe's Psychiatry of the Augustan Era, Johns Hopkins Bulletin, 1908.

able translations of Plato, (H. Muller among others) this expression is translated as "Ignorance" (to be found in *Timaeus*, 86). But I think that from the connection as well as from the etymology of the word *αμαδία*, one ought to conceive of it as a form of idiocy due to disease of the mind, an imbecility which would correspond with our feeble-mindedness of the present day. Thereby Plato was the first to state that oppression or paralysis of the psychical ability is an analogous condition to mental confusion.²⁹

Plato's observations upon mental destruction plainly show that they do not come from a man who as a physician had observed a great number of sufferers, had studied the course of their disease, or had lead them to a favorable end. The profit which his writings may offer for a pragmatic history of mental diseases of ancient times is without importance. On the other hand we have to admit that he had obtained a certain understanding of the nature of mental diseases. It did not escape him that these afflictions may owe their origin also to moral causes, and as Sprengel has already stated, he is the first to call attention to this fact. If his statements concerning mental diseases are to be interpreted that mental disease develop directly from physical processes, but these partly from somatic, partly from moral causes, the latter in an indirect manner, (even immoderate sexual indulgence is only hurtful through the loss of sperma whereby the spinal cord, where it is manufactured and which is a part of the organism, becomes weak,) the opinion of the philosopher thus approaches very closely our present day (1866) ideas concerning the mode of action of psychical factors.

But if we remember Plato's position so far as practical medicine is concerned, one should not come to hasty conclusions such as those of Lichtenstaedt, who among others expresses himself, that inasmuch as Plato only describes *μηνία* (fury) accurately, as a form of pronounced mental disturbance there were fewer forms of mental disease in ancient times. Such an opinion Lichtenstaedt fails to substantiate as a "peculiar characteristic" of that period. We shall discuss this

²⁹ Lippmann (op. cit. p. 17), also translates *amadia* as *amentia*. Ignorance by Plato means *agnoia* (cfr. *Theoetetus*.)

point further. For the present I shall only say that the premises are inaccurate, and the conclusions are unjustified. Even if Plato should have described this form as one of striking character, one glance at Hippocrates shows, however, that a physician at least had the opportunity of observing various forms of such diseases.

In how far and in what manner the influence of his teachers, especially Socrates, may have had upon Plato's ideas of "mental destruction" can hardly be decided, since his psychological views reflect both Pythagorean and Socratic doctrines.³⁰

Aristotle. The great philosopher of Stagyría closely follows the time of Plato. Although this author represents for all times a model of the gifted natural philosopher, yet I do not believe myself guilty of any superficiality, if I premise my remarks by saying that he has offered hardly any essential treasures to the special field of medical doctrine, including psychiatry, at least in the books available to us, although he endeavored in his excellent works and in the most ingenious manner to examine the normal natural history of the mind and its importance for the whole organism.

The natural science teachings of Aristotle, not excluding his medical opinions, have been already subjected to solid examination and commentary, especially in relation to those of his predecessors.³¹

It may be sufficient to mention, that, according to Aristotle, the seat and cause of all diseases is to be sought in the body itself. Of the bodily organs the heart, as the source of internal heat—this important life principle—as the center of the blood circulation, and as the center for sensations and motions and also at the same time as the seat of the immortal divine soul, this is by far the most important organ. It can, however, suffer a moderation of its heat through the cooling influences of mucus, which comes from the brain. So far as

³⁰ Cicero has said: *A Socrate omnis quae est de vita et moribus philosophia manavit* (Tusc. disput. III. V.) Finally I refer to the not previously mentioned *Paraphrosune* as a designation for insanity. In one place of Theaetetus. 100, already cited by Sprengel, he defines: *to agneoein epu aledeia ormomenes psuches, paraphoron suneseos gignomenes, ouden allo paraphrosune.*

³¹ Among others I refer once more to the ule andropine of Philippson, a profound scholar of Aristotle's doctrine.

mental diseases are concerned in Aristotle we meet with the expressions *μανια*, *μαινεσθαι*, *παραινια*; *μελαγχολια*, which latter occurs not infrequently, and does not signify melancholy of the present day, but represents the Hippocratic view of a characteristic temperament due to a preponderance of black bile. According to Aristotle such *μελαγχολικοι* incline to various maladies and also disturbances of the mind. Thus in *προβληματα* [1. οσα ιατρικα μ'] it says, that in a dry summer such individuals can very easily decline into *μανια*, as the other juices being dried out, the black bile greatly preponderates.

In *Ηδνικων Νικομαχειων* (η, 6) two classes of senseless people (*αφρονες*) are distinguished. The first show congenital conditions (*εκ φυσεως*) they have always been unreasonable and only vegetate, *αλογισον και μονον τη αισθησει ζωντες*; they are actually bestial, and naturally so neglected, like some tribe of distant barbarians have been through lack of education. Similar conditions can also be acquired through illness. Such diseases are epilepsy and mania.³²

Such patients can accomplish the most horrid deeds, as for instance matricide and the eating of human flesh.³³

But such actions have to be judged differently from those of others who through evil habit, bad examples, incorrect education, have not learned to control their passions. It is interesting to read in this place that attention is called to the contrast between acquired and congenital mental disease. How again the irresponsibility of certain patients is noted, at the same time, and how, finally, the inclination of the epileptics to criminal acts have been represented as due to the nature of their illness and that they, with demented and phrenzied patients should be deemed irresponsible. Furthermore congenital mental weakness is shown to a much more advanced degree than in Hippocrates. Lippmann (1. Op. cit. pg. 21), quotes some places in which the symptoms of *μελαγχολια* are spoken of and seems to be of the opinion that in this place the mental disease (melancholy) is to be understood. Single statements would truly correspond with the description of our melancholy, as for instance in *προβληματα* IV, 25, and XXX, 14,

32 This seems to correspond, especially in Aristotle, to our Tobsucht (violent mania.)

33 To epar tou sundoulou tis esdien.

where insomnia and the frequent interruptions of sleep by fearful dreams are mentioned. On the other hand it cannot be maintained that Aristotle had melancholia in mind, nor that he was speaking of the melancholic temperament when in προβλήματα υ, 30, he accused the melancholic of having unconstrained sexual desires. According to his opinion these are overloaded with sperma, but in ejaculation an exhalation takes place, they feel an urgent desire for spermatic discharge and feel relieved after the sexual act.

The first paragraph of περι φρονησιν και νουν και σοφian deserves special notice.

Aristotle commences with the question: How can it be explained that great philosophers, statesmen, poets and artists have been melancholics?³⁴

Here it is certainly not our melancholia which is meant but on the contrary, as may be recalled by reading the stories of the great men of all times, that it should be understood as hypochondria. To this the words found in the middle of the paragraph should be added. Τα πνευματωδη παδη και τα υποχονδριακα μελαγχολικα οι ιατροι φασιν ειναι.³⁵

Aristotle answers this question by referring all of the striking occurrences as due to the peculiar affect of the black bile. This may be the cause of many afflictions and may even be dangerous to the demi-gods. Thus Hercules became epileptic through it whence the ancients have called epilepsy the holy disease.³⁶

Through it Ajax became furious and Bellerophon was driven into the wilderness. Empedocles, Socrates and Plato are said to have had such a melancholic temperament. Aris-

34 Cicero refers to this in *Tusc. Diss.*, I, 33.

35 In the text one finds: upochondria, Kuhn, Edit. Aretaeus, pg. 451, but correctly edited as upochondriacha.

36 Τα αρροstemata τον episemticchon ap echeinou prosegonenonleron noson. I consider the above mentioned translation to be more correct than that of Theod. Gaza. *Morb. sacrum et ab illo Herculeum nominavere.* Against this Hippocrates has remarked, that the term holy disease originated in a false notion that it originated in a divine manner. Aretaeus [*peri aition chronion padon* 4], says: it has been called holy because it attacks only such who have committed an offense against the moon, es selenen alitroisi, or because of the seriousness of the illness, eron garto mega, or because only divine help was possible, or because a demon has seized the people. Galen says in discussing the epidemioi of Hippocrates (Edit. Kuhn. XVII. B. 34), it is called herculic, not because a demi-god suffered from it, but to express by the name the terrible nature of the disease.

totle refers the laziness of one, the activity of another, to the coolness or the warmth of the abundant black bile, and compares the various types of character found in nature to the different effects of wine, in that one becomes sad and tearful, (και μερησι δακρυ πλωειν βεβαρημενον υινω, Homer), and another becomes full of hope, benevolent, and this because Venus is associated with Bacchus. Then Aristotle describes how a morbid transition to disease can follow in two ways; in accordance with a marked cooling or heating of the bile. In the first case oppression, groundless anxiety which even induces the patient, especially young individuals, to hang himself. Inasmuch as in them in the natural course of things the confined warmth cools off, whereas such a change is a normal event in the old; yet now and then suicide occurs even in senility. The more sudden the cooling the more precipitous the suicide, so that the act which showed no premonitory symptoms often causes a great surprise. It also happens that some commit suicide after a drunken bout. The fact is to be explained that after cohabitation many become depressed. If the bile is overheated the contrary state is shown, varying from mere abnormal well-being to ecstasy, mania and rapture. νοσηματα αλισχονται μανικοις η ενδουσιαστικις. That such a condition is not always to be regarded as something terrible is pointed out among others in the examples of Marakos of Syracuse, who composed much better when delirious; οτε εκστατη. Certainly it may also lead to fearful scenes as has already been mentioned.

The reading of this paragraph is made all the more striking in that the philosopher makes a comparison of mental disorders with the various stages of intoxication, even to the most minute details.

Lippmann (1. Op. citat. 19), calls attention to two medical histories which can be found in περι δαυμασιων ακουσ. These are very short and of little value. There it is reported that an insane man, παρακοψας τη, διανοια went regularly to the theater for several days, sat down there and applauded as if actors were present. When he came to his senses he said that he had never felt better than during this period. The other case happened to be an innkeeper of Tarent; it is briefly related of

him that he raved about during the night, but by day sold wine and altogether took care of the smallest affairs of his business with the greatest prudence.

So much for Aristotle.

When we glance over his not very considerable material, we can, without prejudicing the high esteem which we owe to his genius, his rare many sidedness, state our opinion that he was not an epoch maker for the development of practical psychiatry, although his psychological doctrines were valuable and had a great following for a long time even among physicians.

Already the thought forces itself upon us that we shall have to search for real advice concerning our subject, not among philosophers, not even the greatest of them, but from physicians and, as a matter of fact, although some philosophers have not been without significance for history, especially when their methods are directed along medical lines, yet with but very few exceptions, we shall profit only from medical authors. We have to remember also that philosophical research was not unknown to physicians, nor did they array themselves in opposition to it. Naturally we shall not pay attention to the unthinking Empirics.

It is not our problem to review the entire history of medicine in all its details. It has been permitted to us to introduce without restraint the single authors which have offered us material. The reader may be convinced that those who shall not be mentioned have not made a close study of psychiatry, or that their documents are lost or at least are in such an incomplete condition that we cannot lean upon them. To such belong men which antiquity has honored as excellent students in the various fields of medical science, and as able physicians; such were Herophilus, Erasistratus and others.

(TO BE CONTINUED.)

SELECTIONS.

CEREBRO-PSYCHIATRY.

SUDDEN DEATH DURING AN EPILEPTIC FIT. (*Gaz. des Hop.*, Jan., 1911.) Marchand, C.

The symptoms of an epileptic fit are so severe that death might be thought a likely event, but apart from accidents, *e. g.*, suffocation or strangulation, it is denied by some.

Rostan, who had charge of 500 epileptics at Salpêtrière, stated: "I have never seen anyone die from an epileptic fit, except as the result of strangulation or suffocation, or where a number of fits has produced fatal cerebral lesions. Death does not occur from an epileptic fit."

The writer has collected fifteen cases, thirteen from the writings of others, and two of his own experience; of these, eight were due to cerebral lesions, bulbar hæmorrhage twice, ventricular hæmorrhage once, meningeal hæmorrhage once, subpial hæmorrhage twice, and cerebral congestion twice. Of the non-cerebral causes, he gives rupture of heart three times (left ventricle twice, right ventricle once), rupture of aorta twice, obstruction of respiratory apparatus by food twice. In the author's two cases (bulbar hæmorrhage and subpial hæmorrhage) the ruptured vessels were healthy.—*M. A. Collins, in Jour. Nerv. and Ment. Dis.*

In one of our cases, the patient went into the epileptic status, died immediately after the removal of a conical spicula, imbedded in the cortex. The spicula was one of three, the other two being round and not so deeply imbedded below the meninges.—*ED.*

CLINICAL NEUROLOGY.

VEGETARIAN DIET FOR EPILEPTICS.—Messrs. Lallemond Rodiet and J. Ch. Roux, *Annales Medico Physiologiques*, have made experiments with strict vegetarian diet in epilepsy with favorable results in seven cases, moderately satisfactory in three and nothing in one.

DEMENTIA PRAECOX AND TUBERCULOSIS.—MM. Soutzo et Dimitresco in a great number of patients made researches with the aid of tuberculin in ophthalmic reaction and have constantly observed a great frequency of tuberculosis in these cases. He thinks that in a goodly number of cases there does not exist anything beyond purely accidental co-existence between the two maladies. (*Revue de Psychiatrie.*)

MENTAL STRAIN.—Late hours given to mental toil; not enough sleep, and not enough physical exercise and relaxation, are hurrying men and women to premature graves. Many have such a weight of business care in the eagerness to possess fame or fortune, that when they do lie down to sleep, the mind does not rest; but runs over loss and gain, trade and speculation, until the temples throb, the heart palpitates, and the nerves tremble like an aspen leaf, till the hours for sleep have passed, and the strength is exhausted. The same thing is repeated from day to day, and from night to night, until some disease of the mind or body is the result. Their lives often become wretched.

Dr. Roger S. Tracy, of the New York Health Board, once said: "The exhaustion brought on by continued waste of nerve tissue, and unceasing molecular conflict, so to speak, is not only a source of danger, but of suffering to thousands. To obviate the ill-effects of such wearing out of the nervous system, some take to stimulants with which to supply an artificial strength; finally there comes a time for a premature breaking down; and the poor man or woman either dies, or lingers a wreck of what he or she once was." It should be written on every wayside, "Give the mind its required rest!"

Many occupations are necessarily exhausting to the mind. Lawyers, physicians, bankers, and railroad officials, are often too much burdened by exhausting care and anxiety. Too much responsibility imposed upon them.

Nature has stamped the decree of the Creator upon our physical constitution, as well as upon our minds, that when we begin to break under too much physical or mental work, the warning comes, "thus far and no further" must we go. When the faculties begin to give way under the load of mental worry and care; and the physical man begins to tire it demands rest; and he who disregards the warning, will reap the penalty in arterio-sclerosis, paralysis, paresis, Bright's disease, and often insanity.

As a well preserved old age comes on, it should be life's resting place; not that the rest of age means idleness, but more time for thought and action. It is not to rust out, nor become listless and stupid, but remember some of the most wonderful things have been done in old age. Plutarch learned the Latin language after he passed his sixtieth year. In old age, as in childhood, the time of mental effort must not be continued too long at one time.

The mentally sound and physically strong are those whose lives are methodical, systematic, and who get rest betimes; maintain an equilibrium of mind and body, who live cheerful lives, and enjoy the beauties of Nature, viz., the farmers; they are the people. Because of their habits and environments, they are the healthiest, happiest and best people on earth.

To this might well be added the other brain strains of business failures, reversals of fortune, unrequited love, over-mastering bereavements, etc.—*D. L. Field, M. D., Jeffersonville, Ind., in Medical Fortnightly.*

CLINICAL PSYCHIATRY.

THE COLOR SENSE.—The biology and psychology of this sense is the subject of a paper by Wm. S. Wadsworth, *Annals of Ophthalmology*, January, 1908. Recently, E. B. Wilson of Columbia University speaks of people affected by variations

in the color sense. Wilson does not refer to the work of Wadsworth who, years ago, at the University of Pennsylvania, discussed with the writer, these problems. Green appears to be one of the most difficult. Green from yellow, green from red, green from gray. Wilson treats of the ailment biogenetically. Wadsworth as a question in pure psychology. Wadsworth shows that color has to do originally with, 1, self-safety; 2, sexual selection; 3, emotional, as fear or rage, together with sex action; 4, yellow-blue series having a chemical significance; 5, a green-red series having a thermic or physical significance; 6, the fierce, visceral reds of the Venetian school; 7, the soft, deep violets of the truly religious painters.

Wadsworth gives interesting relations between emotional ascendance and individual excesses, and the color sense.—*Condensed Abstract from Med. Times.*

THE CEREBRO-SPINAL FLUID IN MENTAL DISORDERS [*Le Liquide cephalorachidien dans les maladies mentales.*] (*Gaz. des Hop.*, Feb., 1911.) Roubinovitch, J., and Paillard, H.

This article is a summary of the more recent work on the physical, chemical, and bacteriological properties of the cerebro-spinal fluid in cases of insanity. The authors attach considerable importance to the presence of choline, and regard it as a clear indication that nervous elements are undergoing disintegration. The technique for the detection of choline is fully described, and an addition is its reaction with polarised light. The statement is made that nearly all culture experiments of the cerebro-spinal fluid are negative.

The changes occurring in the cerebro-spinal fluid in general paralysis are detailed. A discrete lymphocytosis is always present, and indicates the presence of the latent meningitis of a more or less chronic type, which always precedes the disease. The pressure varies as the mental state alters; it is high during convulsions and excitement, and low during the later paralytic stages. On account of increased cellular elements of various kinds the specific gravity is raised, while an increased amount of albumen is always found. The presence of cholesterin, choline, and ammonia has been noted. The invariable occurrence of lymphocytosis is important, as in the

alcoholic and arterio-sclerotic psychoses no such phenomenon is found. The concluding remarks upon general paralysis are that the cerebro-spinal fluid is sterile and Wassermann's reaction positive.

Some observations are also made upon the cerebro-spinal fluid in alcoholic, diabetic and uræmic conditions, but nothing definite or constant is described.—*Colin McDowall, Excerpt Dept. Jour. Nerv. & Ment. Dis.*

HOMOSEXUALITY AND INSANITY [*Homo-sexualität und Psychose.*] (*Zeit. f. Psychiat.*, Bd. lxxviii, No. 3, 1911.) Nacke, P.

If homosexuality is, as was long believed, a manifestation of degeneration, we should expect to find, as Nacke points out, that the homosexual yield a relatively larger contingent to our asylums than the sexually normal population. As a preliminary step in his investigation, Nacke applied to Hirschfeld, of Berlin, who is universally recognized to possess a wider acquaintance with sexual inverters than any other authority. Hirschfeld replied that, among some 6,000 homosexual persons whom he had had an opportunity of knowing, hysterical conditions (not usually on hereditary basis) were fairly common, and neurasthenia of high degree was decidedly frequent, but though states of depression were common, he had never seen pure melancholia, and very seldom mania, but paranoiac delusional ideas frequently, and he agreed with Bryan that religious delusions were not uncommon. General paralysis occurs, but is comparatively rare, and the same may be said of dementia præcox. On the whole, although Hirschfeld was unable to give precise figures, there was no reason whatever to suppose an abnormal prevalence of insanity. This is Nacke's own view. He finds confirmation in the very large percentage of inverters (75 per cent.) who are of good heredity, as well as in his own asylum experience. He has scarcely found a single true inverter in the asylum. The only probable exception was a patient who told Nacke after leaving the asylum that he was an inverter, and at a later period fell into the hands of the police on this account. It is quite true, Nacke points out, that homosexual actions occur in every form of psychosis, especially in congenital and secondary dementias,

and at periods of excitement, but we are here almost exclusively concerned with pseudo-homosexuality, which has nothing to do with true inversion.—*Havelock Ellis, in Jour. Ment. Dis.*

NEUROHEREDITY.

LUGARO ON MORBID HEREDITY.—The spectre of heredity suggests the prevention of marriage amongst those predisposed. It is possible to give the best advice on the question, but it is never carried out. That individuals who are insane or who have been insane at some time or other are not the most suitable persons for marriage, is already recognized by all; but admonition in this connection usually has little or no effect. On the other hand, it would only be captious to deter from marriage one psychically sound, simply because his family tree contained several cases of insanity. To predict a bad outcome of marriage in such a case, would be to adopt the easy confidence of the charlatan; and the party interested would never allow himself to be convinced.

The recommendation to apply Malthusian principles to degenerates is founded on analogous arguments. It is as if one recommended abstinence to inveterate drunkards, and prudence to insane persons. Laws prohibiting degenerates from marriage, and suggesting their castration, have been proposed. In America, such a law was actually proposed and approved of for habitual criminals, but never placed in force. To-day, some support a milder, but not less efficacious means—resection of the vas deferens. At the present time, there are some who propose to sterilize degenerates by means of the Roentgen rays.

On this question, the usual mistake is shown regarding the importance of degeneration and the transmission of heredity. There are some who consider as hereditary all transmission of normal and abnormal biological characters, even though accidental; but, in doing so, the undeviating rigidity of mechanism which is peculiar to physiological heredity is granted to the transmission of morbid characters. Degeneracy itself and

the segregation of the insane, constitute a most powerful check on reproduction; and, if the effects of this check are not felt throughout generations, we must surmise that the premise of heredity as the prevailing factor is wrong. Prophylaxis against degeneracy consisting in the prevention of reproduction should be carried out on those who may be called degenerators, rather than on degenerate organisms. But if it is almost superfluous to preclude the idiot from marriage and reproduction, on the other hand it would be impossible to prevent the union of all the individuals who are in a condition to procreate degenerates; all alcoholics, all pellagrous, all women not under circumstances to complete the lactational period, all workmen exposed to intoxications in the exercise of their trade, all syphilitics—in fact, four-fifths of humanity. All this effort would be insufficient in any case, because every organism, however sound it may be, can become capable of producing degenerates, when exposed to morbid causes.

The range of morbid heredity is more restricted than has generally been admitted. In any case, the mechanism of morbid heredity does not resemble that of normal biological heredity. If it was identical with it, the constant selection attained by the segregation of the insane in asylums would suffice to restore humanity. But the primary disturbance is acquired, and is reflected in the same or some other form in several generations; degeneration is therefore a disease of the stock, which is acquired through external influences. It is against these external causes that we must direct our activity.—*Institution Quarterly*.

BLACKSTONE ON CONSANGUINITY.—“Consanguinity, or kindred, is defined by the writers on these subjects to be *vinculum personarum ab eodem stipite descendantium*: the connection or relation of persons descended from the same stock or common ancestor. This consanguinity is either lineal or collateral.

“Lineal consanguinity is that which subsists between persons, of whom one is descended in a direct line from the other, as between John Stiles (the *propositus* in the table of consanguinity) and his father, grandfather, great-grandfather,

and so upwards in the direct ascending line; or between John Stiles and his son, grandson, great-grandson, and so downwards in the direct descending line. Every generation, in this lineal direct consanguinity, constitutes a different degree, reckoning either upwards or downwards; the father of John Stiles is related to him in the first degree, and so likewise is his son; his grandsire and grandson in the second; his great-grandsire and great-grandson in the third. This is the only natural way of reckoning the degrees in the direct line, and therefore universally obtains, as well in the civil, and canon, as in the common law.

"The doctrine of lineal consanguinity is sufficiently plain and obvious; but it is at the first view astonishing to consider the number of lineal ancestors which every man has, within no very great number of degrees; and so many different bloods is a man said to have in his veins, as he hath lineal ancestors. Of these he hath two in the first ascending degree, his own parents; he hath four in the second, the parents of his father and the parents of his mother * * and at the twentieth degree, or the distance of twenty generations, every man hath above a million of ancestors, as common arithmetic will demonstrate."—*Institution Quarterly*.

NEUROTHERAPY.

THE PERISTALTIC HORMONE.—The following editorial ought not to be overlooked. The so-called hormone which has given the greatest promise as a therapeutic agent is that which pre-exists in the gastric mucosa (the gastrin of Edkins), the spleen, and elsewhere. The fact that it occurs in abundance in the spleen unassociated with such pathogenic spores as might possibly find themselves in the stomach, led Zuelzer to obtain the body from that gland; for the hormone can be used only by intravenous injection, and cannot be sterilized by heat sufficient to destroy spores without affecting its integrity. At the recent meeting of the German Surgical Society Henle reported on

the use of the peristaltic hormone in postoperative intestinal paresis (*Deutsche medizinische Wochenschrift*, May 18). In five severe cases the remedial action was thoroughly in evidence. All synergistic remedies and procedures should be combined with the injections, and the latter may be repeated if necessary, although a well-marked febrile reaction sometimes follows the use of the remedy. The peristalsis obtained is not so striking in the clinic as in animal experiment. Dencks has used the hormone freely, both experimentally and in the clinic. The remedy he finds deposited in the spleen, its original source. Peristalsis develops in from ten to fifteen minutes. The action may be permanent, persisting for months. If the subject is greatly constipated no immediate effects may be noted, and peristalsis may set in only after several days' interval. Results in intestinal paresis are inconclusive. The speaker observed a rise of temperature, but no other collateral phenomena. Borchardt recommends the hormone in the intestinal inactivity of spinal disease. In postoperative paresis he has seen both brilliant results and failures. Zuelzer, the discoverer of the splenic hormone, now uses it to differentiate between chronic constipation and ileus. In 25 cases of postoperative paresis Goldman saw 10 prompt results and 5 total failures.—*Editorial in July Med. Rec.*

NEUROTOXICOLOGY.

ANTIPYRIN AND CALOMEL are incompatible according to the *Jour. A. M. A.* A mixture of one part of calomel, three of antipyrin, and six of sodium bicarbonate. On treating this mixture with water a bluish grey residue is left and two grains of calomel in such yield 1-3 to 1-2 grains of corrosive sublimate.

SULPHONOL POISONING.—An attempted suicide by sulphonol is reported by Dr. H. S. Sington, the attending physician in the *West London Medical Journal*. A lady thirty-eight years of age swallowed 125 grains of sulphonol tablets,

less than two hours later she was seen by Dr. Sington just as a lay friend was about to give her hot brandy. Sulphonol's solubility in water is 1 to 45 while in alcohol it is 1 to 90. She was treated with a pint of coffee and aphomorphine, energetic stimulation with strychnia and more hot coffee.

Subsequently an erythematous rash appeared upon the face, but there were no other serious after effects.

PSYCHIATRY.

PROGNOSIS OF DEMENTIA PRAECOX (*Prognose der Dementia praecox.*)

This contribution has been tabulated by the writer so that the different conditions may be expressed numerically. Of 220 cases of dementia praecox 53 occurred between the ages of fifteen and nineteen, 100 occurred between the ages of twenty and twenty-four, 47 between the ages of twenty-five and twenty-nine, and 20 occurred between the ages of twenty and thirty-four. Of these cases 72 were in military service and 148 were in civil life. In a table showing the different forms of dementia praecox, 56 cases were of the hebephrenic variety, 69 were of the depressive paranoid form, 45 had catatonic symptoms, 28 were cases of the paranoid form. The percentage of recoveries at the different ages varied from two and three-tenths in the cases under twenty years to twelve and five-tenths in those above thirty years of age. The hebephrenic form gave the lowest per cent. of recoveries. As to the different races, twenty-five per cent. of the Germans recovered, eighteen per cent. of the Slavs, and six and one-tenth per cent. of the Jews. From this statistical study the principal deductions are as follows:

1. Direct hereditary taint of mental disease appears to give an unfavorable prognosis in cases of dementia praecox.
2. Cases which develop in an acute or subacute manner will probably reach a favorable outcome.
3. Cases occurring in military service usually take a favorable course.

4. The individual constitution is not without its influence upon the course and result of a case of dementia præcox.

5. Other things being equal, German patients gave a better prognosis than the Jewish race, in whom the disease seemed to take a decidedly more unfavorable course.—*Translated and excerpted by G. Aldan Blumer for Albany Medical Annals.*

F. X. DERCUM, PHILADELPHIA, criticises Freud's theory as applied to dreams. He considers that Freud's method induces a sort of autohypnosis and he does not agree with him that the mind exercises a sort of psychic activity in the deepest sleep. He agrees with Samuely that dream conceptions arise just before the sleeper awakens and are part and parcel of the act of awakening. The dream is afterward constructed on the materials they furnish. In the dream analysis of Freud, as well as in the other forms of psychoanalysis, both the physician and the patient are in an expectant mental attitude and there is in both cases a suggestion at work. The role that dreams play in etiology, he thinks, is very doubtful; they are probably always symptomatic and never causal, and their symptomatic value is of little consequence.—*Jour. A. M. A. Med. Sent.*

THE SO-CALLED OEDIPUS-COMPLEX IN HAMLET.—J. H. Lloyd, Philadelphia, criticises severely the explanation of Hamlet's alleged insanity based on the Freud psychological theories. He speaks of the obsession of sexual ideas which seems to rule the whole Freudian school and takes this "oedipus-complex" offered by Jones for Hamlet's mental condition as a striking example of such obsession. Jones seems to have made out that Hamlet had an erotic feeling toward his mother which would appear to most readers of the play very unnatural if not impossible, taking in all the suppositious conditions. Lloyd says that we are in an era of what may be called subterranean psychology and are invited to dive into the subconscious, the "subliminal," and into the dark underground recesses of the mind to search for the data of a new science. As a result we have psycho-analysis, Eddyism, the Emanuel movement, and the "oedipus theory" of Hamlet as propounded by Ernest Jones. All these tendencies, he says, may be classed together

in what may be called the cult of Freud. He asks: Can it be that the whole Freudian phenomenon is a form of sexual neurasthenia breaking out among a class of idealistic men and women? He does not believe that there is as much mystery in Hamlet's behavior as the commentators make out. It is impossible to classify his insanity as such or make it accord with our scientific ideas.—*Jour. A. M. A.*

MEDICAL EDUCATION.—L. F. Barker, Baltimore, (*Journal A. M. A.*), says that, comparing medical education in the United States to-day with what it was twenty years ago, one cannot but feel impressed with the remarkable changes that have taken place. The reform is noteworthy in history. Among the main influences he mentions especially the initiation of a graded course in medical instruction by the Medical Department of the Northwestern University as far back as 1859, the adoption of this and the gradual increase of requirements by Harvard and other schools and the step taken in 1893 in the organization of the Johns Hopkins Medical School. Inferior colleges have, to an encouraging extent, gone out of business or consolidated to make better ones. The equipment of medical colleges has been vastly improved. The preliminary requirements have been enlarged, etc., etc., in spite of the financial difficulties and the absence of endowed hospitals. Among the agencies especially influential for reform he mentions the Council on Medical Education of the American Medical Association, the Carnegie Foundation for the Advancement of Teaching, the recent report of which he admits has been considered somewhat harsh * * * A definite policy, he says, has been established in regard to the non-clinical departments of the medical schools and with better laboratories and endowed professorships they are flourishing, the recognition of American work has increased and the stream of students going abroad has been diminished. There are certain dangers, however, to be mentioned, and he sees them possible in the rise of institutes for research and the greater demand for professors in the "non-practitioner" chairs. The former may deprive the teaching schools of men who would be of value to them and there is a

possibility, he thinks, in the extremely rapid growth of some of the state universities, of a depreciation of the teaching faculties to some extent in the future. The pecuniary status of the medical professor also raises certain questions which are discussed, and if mediocre compensation is given there is danger that it will attract only the mediocre men. There are workers who work for science only, without regard to compensation, but it is not desirable to inhibit a man in his work by financial anxiety and social penalties. The gradual increase in cost of living raises these questions particularly at the present time. The clinical departments of the medical schools are at present on the eve of important changes, and the subject is taken up somewhat in detail. It is doubtful, he thinks, whether it is justifiable to make obligatory training in the clinical specialties beyond what can be given in the departments of medicine, surgery and obstetrics. The right place for extended courses in the specialties is in the postgraduate medical school, where men fit themselves for special practice. The greatest need of medical schools at present is that of school-controlled hospitals, in which the students can actively participate in the work of diagnosis and treatment under skilled direction. * * * *

He does not think that in our reorganized medical schools it will be desirable to have the whole faculty made up of non-practitioners, or at least not to exclude them altogether from consultative or operative work outside of the college hospital, as is urged by some enthusiasts. There is room for practitioners, teachers and investigators.—*St. Louis Med. Rev.*

MUCOUS COLITIS CONSIDERED AS A NERVOUS DISEASE, WITH SPECIAL REFERENCE TO TREATMENT.

While there are various organic colon diseases accompanied by mucoid stools, the disease known as "mucous colitis" constitutes a distinct morbid entity and is undoubtedly of neurotic origin. The nervous factor not being well understood, the unfortunate sufferers are still dieted, starved, and clystered without avail. Among the many special features which lead us to classify this disease as a neurosis the author places emphasis on three factors: a "nervous" temperament, chronic constipation, and a period of prolonged mental stress.

The pitfalls of diagnosis are discussed, with special reference to organic disease and therapeutic measures are then considered.—*Francis Hernaman-Johnson. The Practitioner, November, 1909, p. 706. Abbreviated Abstract from Daws' Excerpt Alb. Med. Ann's.*

MUNICH EXPERT COURSE of special lectures on psychiatry this year was as follows:

This well-known university extension course on psychiatry will take place this year in Munich beginning October 23 and extending to November 11, 1911. The following courses are planned:

Allers (Munich): Pathological Chemistry of the Psychoses.

Alzheimer (Munich): Normal and Pathological Anatomy of the Cortex.

Brodman (Tübingen): Topographical Histology of the Cortex.

Isserlin (Munich): Experimental Psychology and Psychotherapy.

Kraepelin (Munich): Psychiatric Clinics.

Liepmann (Berlin): Aphasia, Apraxia, Agnosia.

Plaut (Munich): Cyto and Sero-Diagnosis.

Rüdin (Munich): Degeneration Psychoses of Children.

Weiler (Munich): Physical Psychiatric Methods.

But we regret to note this especial course is not to be continued through 1912. They are doing better for psychiatry in London on this important subject.

PITUITARY TUMOR AND ACROMEGALY.—Under the caption simply of acromegaly, the *Hospital*, July 29th, has the following:

At a meeting of the Societe de Biologie, Drs. Claude and Baudouin reported an interesting case of acromegaly in which there appears to have existed a veritable anarchy of the internal secreting glands. The patient was a woman who in 1885, at the age of twenty-five, developed a typical condition of acromegaly. The classic symptoms of acromegaly successively presented themselves: hypertrophy of the hands, feet, and face, cervico-dorsal kyphosis, macroglossia. For ten

years the arterial pressure was raised, amounting to 26 cm. and 28 cm. of mercury. At the same time this patient showed all the signs of Basedow's disease, exophthalmos, tachycardia, tremors, and pulsating goitre. Towards the end she was affected with marked asthenia, confining her to her bed. The symptoms therefore suggested a complete anarchy of the internal secreting glands, the hypophysis, suprarenals, and thyroid all functioning in excess, while the suppression of menstruation suggested the cessation of ovarian function as the *primum movens* of the whole condition. At the autopsy, a voluminous tumor of the pituitary body was found, weighing 48 grammes. All the other internal secreting glands were hypertrophied and in a state of hypersecretion. The ovaries were atrophied. The hæmolymphatic organs (spleen, lymphatic glands, etc.) were also hypertrophied.

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EDITORIAL.

[All Unsigned Editorials are written by the Editor.]

THE NATIONAL ECONOMIC LEAGUE in its relation to subjects voted for consideration makes a good selection from the lawyer's, politician's and organized labor's standpoint, but we regret to see the subject of eugenics eliminated, a subject rightly and broadly considered as the foundation of good and sane government of the people, for the people and by the people.

Apropos is an interesting plea for eugenics in the August number of the *Pacific Monthly* by Dr. Stephen S. Wise, Rabbi, on Race Culture versus Race Suicide—A Plea for Eugenics.

BETTER PSYCHOLOGY IN THE SELECTION OF HOTEL BELL BOYS on the part of hotel proprietors as to family and character antecedents might arrest many of the hotel crimes of certain immature devils in human form who are given these places without right inquiry and character discrimination as in the case of Paul Geidel, the murderer of the aged William H. Jackson, in a New York hotel.

He appears from his confession of the manner and method of his crime and his nonchalant, unfeeling manner of describing his victim and his own murderous work, to have been another Jessie Pomeroy, moral imbecile, entirely out of place in the responsible and trustful position given—a place only for mental integrity.

Incidentally such a creature of such defective moral sense in such a position, with easy opportunity for such a comparatively motiveless, horrible crime, reflects indifference or ignorance on the part of the hotel management that puts such risky rascals in such close touch with a hotel's trustful guests.

The following is the press record of this mild, innocent looking moral monster of seventeen years. He is reported to have told every detail of the crime, even to what he thought the aged broker was thinking about before the murder took place.

He entered the broker's apartments by way of the bathroom, he saw him in his pajamas. There was a light in the bedroom. Jackson, he says, was standing so he could see the bathroom window and the boy says the broker saw him crawl through it. Jackson pretended he did not see the boy enter.

"I know he saw me, and I know he was frightened," says Geidel. "He made believe he wasn't, and he went to the window and began to hum and whistle."

The boy seemed to be pleased to know that he had possibly solved the psychology of the aged man's conduct.

"Why didn't you go for him then?" the boy was asked.

"Oh, no, not then; that wasn't the time," he replied. "He would have cried out."

Geidel says he waited. He thinks he waited about twenty minutes. Jackson at last put out the light and went to bed. In about two minutes more he was snoring.

"He made believe he was snoring," said the boy. "I know it was a fake."

Geidel says he then prepared the chloroform and wash cloth he had brought with him. A cloth about a foot and a half long he saturated with the anaesthetic.

He crept stealthily to the man's side, and trying to make sure in the darkness, where his mouth and nose were, jammed the cloth down on his face.

BROKER FIGHTS FOR LIFE.

The broker had not been asleep, said the boy. He was full of life and he struggled. He summoned enough strength to get the better of the boy, and Geidel says:

"He got me on my back on the floor."

Then, the boy says, he fought to get hold of Jackson by the throat and succeeded. The aged broker could not stand the pressure on his throat, and was almost powerless, but continued to struggle.

The boy released himself from the broker's grasp, and, holding Jackson's throat, felt around on the floor for the cloth he had dropped. He found it and clapped it down on the broker's nose and mouth.

Geidel insists he did not beat Jackson with any weapon, but says he kept pounding him to make sure he was overcome and to help make the chloroform more effective.

"BY THEIR WORKS YE SHALL KNOW THEM" would hardly be a good criterion to judge the Californians for their Senator of that name assuredly misrepresents the sentiment of that state in his opposition to the Owen's bill for a National Department of Public Health. The sanitary climate of California has lead the Christian Scientists astray and they have pulled the wool over Senator Works' eyes and he is going it blind in his opposition to the great wave in the direction of public eugenics, health conservation and disease prevention.

An extended criticism of Senator Works may be read in that standard Ohio journal, *The Lancet-Clinic*, for August 5th, the organ of the Great Mississippi Valley Medical Association, an association next to the A. M. A. in numbers and influence.

ST. PIERRE ASYLUM FOR THE INSANE, near Marseilles, France, at last accounts had fifty-five cases of cholera Asiatica with a mortality of thirty.

We hope this plague will be mastered before it gets to us and, if it does reach us, we hope that in addition to the best antiseptic precautions our physicians use they will employ the internal antisepsis of calomel, salol and pepsin, with brain and mind tranquilization and induce sleep with the use of bromide of sodium and chloral. Bromide itself is somewhat antiseptic and chloral more so. The chloral in a single full dose in twenty-four hours, at night time only, in phenolated and plain pepsin essence solution would not be therapeutically amiss.

THE BOY SCOUT MOVEMENT will prove of great sanitary benefit to the rising and coming generations by accustoming the boys of the land to living sanitarily out of doors as well as training them to be considerate of duty to others and themselves and incidentally in good works for the popular welfare, when the best that is in the best men may be required for the good of the country.

"AS YE SOW THAT SHALL YE ALSO REAP," and as we have sown of indifference to enlightenment that are we also reaping from the people.

Dr. Murphy in his presidential address before the A. M. A. asks and so do we: "What has the medical profession done to educate the public in the last three centuries? Nothing! We have demanded our acceptance on blind faith, and the age of blind faith in individual is passed. What have we taught them of the real truths of principles of scientific medicine? Nothing! What guidance have we given the layman in the selection of a skillful practitioner? None!

And this he suggests: "The people should be educated in the basic principles of medicine through publication of articles in the daily press or weekly periodicals which should be prepared in a readable and comprehensive manner."

This is the next presidential affirmation since President Burrell of the A. M. A. made a similar one on the subject and the Harvard Medical School particularized the suggestion

by a Saturday and a Sunday course of popular, scientific, true medical instruction to circumvent the misleading lies of quackery and ignorant pseudo-scientific, visionary and fatal fadism.

Let the people and the regular medical profession learn to reason together and legislation will become more friendly and popular sentiment everywhere more in accord with the real saving truth of true scientific medicine and opposition to saving health proposals, like that for a National Bureau of Health and Sanitation, will vanish.

THE FOLLOWING WARNINGS or sanitary warnings compiled by Dr. A. S. Barnes, Jr., call attention to many essentials for health and efficiency.

To these might have been added precautions against forming the alcoholic toxemia habit by beer and wine drinking and exhaustion of the reserve strength through excessive sexual thought and action as well as through inadequate sleep. The enforced march should be preceded and followed by much sleep.

A good scout will not take unnecessary risks and a word of caution, when on a hike or camping, may save him or his companions from accidents and sickness. There is danger in the following:

Sitting on damp or cold ground.

Cooling off rapidly when overheated.

Damp clothing and blankets.

Riding on platforms of railroad trains, street cars, and catching on or jumping off while cars are moving.

Walking across railroad trestles, or on right of way.

Drinking unwholesome water.

Drinking too much water when overheated. Thirst can be quenched by gargling the throat with water before swallowing.

Improper food, or food improperly cooked. Potatoes and pork should be thoroughly cooked.

Reckless climbing in trees or over barbed wire fences.

Remaining under or near large trees in thunder storms.

Attempting to carry any unnecessary article or lifting heavy objects.

Letting canned food stand in tins after having opened same.
Lessening his powers of endurance through loss of sleep.
Camping in low, damp places.
Walking across pastures containing cattle.
Petting or kicking at strange dogs.
Sleeping in the open without mosquito screening.
Wearing stockings with darns in toe or heel on hikes.
Eating wild berries or mushrooms.
Bathing after a full meal.
Taking hold of swinging electric wires.
Carrying matches unprotected in pockets.
Playing with or near fire.
To rub eyes with dirty hands.
Having sinks too near camp or where they can contaminate drinking water.
Cutting towards you with knife.
Eating unripe fruit.
Neglecting a cut or scratch.

DR. JOHN B. CHAPIN, the medical superintendent of the Pennsylvania Hospital for the Insane, and an honorary member of the Medico-Psychological Association of Great Britain and Ireland, has resigned his office, the resignation to take place at the pleasure of the board of managers.

After fifty-seven years of service as an alienist he retires with a record which fairly earns for him the title of the Nestor of American psychiatry.—*McDonald's Epitome in Jour. Ment. Science.*

SUPREME COURT RULING ON A CANCER QUACK.—A certain cancer quack was prosecuted for misbranding, in that he claimed that the contents of the package of medicine which he sold was a sure cure for cancer when he well knew that it was not. The Supreme Court in its decision held that the wording of the Pure Food and Drug Act was such that it could only be made to cover the falsity of statements regarding the nature of the contents of the package, and that there was nothing in it which could prevent any one from making any claims, no matter how extravagant or false, regarding the curative

action of the contained remedy. We are glad to say that there was a very strong dissenting opinion signed by three members of the Supreme Court who took a very different view of the case. Of course this decision means that the Pure Food and Drug Act must be rewritten and that new legislation must be framed so that there can be no possible misunderstanding of its meaning. President Taft very promptly recognized the dangerous possibilities of this decision of the Supreme Court and in a subsequent message to Congress he has urged the passing of a law which would prevent the cancer quack and other quacks from selling medicines which falsely claimed to be able to cure disease. It is good to know that we have a President with such a broad knowledge of the necessity of protecting the people from some of their most dangerous enemies.

We can not understand the logic that permits a quack to promulgate a lie as to the curability of an inert substance and get the people's money under false pretense while it sentences the counterfeiter and the forger. Here is another instance where the judiciary needs an *amicus curiae medicinae* or a medical member on the bench to help out in distinguishing between sophistry and logic in its reasoning in relation to medical matters.

THE SEGREGATION OF IMBECILES AND IDIOTS permanently to prevent propagation of these defectives is the plan of a Pennsylvania commission and law creating the latter, lately signed by the Governor of that state.

MICHIGAN PAYS PHYSICIANS for certificates of birth and deaths for registration. The doctor, like the lawyer, is coming into his due for service to the state.

OPHTHALMIA NEONATORUM is to be treated only by licensed physicians—no longer by midwives—in Michigan. This will greatly reduce the need of blind asylums there, for there are more blind who are congenitally so afflicted than otherwise. The era of sensible prevention of congenital affliction is dawning in America. Some day the marriage of fools and the breeding of the brain-broken will end. The conjugal produc-

tion of insanity, epilepsy and inebriety should not be encouraged through matrimonial mis-alliances and unwise port entries of defective immigrants any more than the making and distributing of impure food products.

THE UNITED STATES ARMY MEDICAL SCHOOL, giving a year's course on military surgery and tropical medicine, is an excellent addition to the service on the medical staff of the army. This is an excellent post-graduate idea just as the post-graduate year and diploma in psychiatry are.

AN ARMY OFFICER married at one o'clock in the morning, shot and killed himself at 7 o'clock the same morning. His age was twenty-five. She was young and handsome and well connected. She gives no explanation why they were married at that hour nor the cause of the tragedy.

A young man professionally worthy and successful who came to me from a distant state marries a worthy woman whom he greatly esteemed, immediately during the honeymoon regretting and lamenting the fact and abandons her under melancholic revulsion of feeling, thinking he had done her a great wrong and handicapping himself in his calling and ambition, ought to have married another, pitying her and reproaching himself for the imaginary mistaken act toward the charming little girl.

Acts like this are not infrequent among the erotopathically brain disordered of both sexes. How are we to account for them where no insanity has appeared before the denouement? Precursory mental aberration being but an undemonstrable assumption, where no rational cause can be found cerebral mental erotopathy is the presumption, but how can we prove it? Often we can not, except by reasoning a posteriori and a diligent search for conditions of mind, deranging brain condition and disorder, post, ante and immediate.

IF PHTHISIOPHOBIA as at present developing extends to dust fear generally, a sanitary suspicion of dusty streets, dust covered edibles, drinking cups, etc., will demand anti-microbic

protection against exposed meats, candies and the common drinking cup and glasses in saloons, the communion cup.

Microphobia may yet become an ally of temperance. There are snakes in the glass as well as in the grass. The transition will then also be easy in the public mind from fear of physical to psychical contamination. Concern for the kind of brains propagated and minds generated through heredity and environment will then become as prevalent as for the breed and physiologic tone of cattle, horses, chickens, dogs, Missouri mules, etc., etc. A sanitary millennium is coming when eugenics will become paramount.

THE LIBERTY OF THE INSANE.—*Le Revue de Psychiatrie et de Psychologie Experimentale* can be relied upon for sound psychotherapy concerning the care, as well as the medication, of the insane. Discussing in review an excellent contribution on the subject of French legislation for the insane by Dr. S. Cossa, physician-in-chief and inspector of the insanity service of Nice, approving the open door method, or "*des portes ouvertes*," is thus objected to by this very able *Journal of Psychiatry*, etc. "Cette methode est, dans ses consequences extremes, absolument impracticable. Il est socialement impossible de laisser a l'aliene la meme liberte qu' a l'homme normal."

With this correct criticism *The Alienist and Neurologist* is in full accord.

Give the insane all the liberty their malady, their welfare and the public security permit. No more, no less. That noble-hearted Frenchman, Philip Pinel, struck the shackles from them and opened the doors of the dungeons of Bicetre, but we must not shatter our sense of psychic sanitary propriety or take leave of a sound psychotherapeutic philosophy, by giving the insane more liberty than is good for their own inhibitions and sanity welfare and the good of the community in which they live.

RESTRAINING THE SUPREME COURT.—Under the title "How to Pull the Supreme Court's Teeth," Congressman Berger has made the last clause of his pension bill provide that "the exer-

cise of jurisdiction by any of the Federal Courts upon the validity of this act is hereby expressly forbidden."

It would be well if the State of Missouri and some other states should provide that State Boards of Health should not exercise the autocratic mandatory power of wrecking chartered medical colleges on pretext that they are not equipped to send their students before them for examination, this being a question for skillful chartered school teachers and not of non-expert health boards who are not of the teaching fraternity and not lawfully entrusted with the management of medical schools, though the Supreme Court of Missouri has decided that a school's graduates, whom they did not approve of in advance, should not even come before it to take the examination after a lower court had decided they could—the autocratic, unjust, tyrannical charter-annulling order of the Board to the contrary notwithstanding. What a commentary on personal and chartered rights!

DESTRUCTION OF INDEPENDENT MEDICAL SCHOOLS can never be accomplished (and ought not to be) under State Health Boards unlawful coercion. These are of, for and by, the profession and their Alumni will rescue them through the legislatures and with their own means, if necessary. Carnegie "and his men" and Rockefeller had better have endowed some of them. Better lend strength to the weak than double the strength of the already strong.

IN MEMORIAM.

HUGHLINGS JACKSON is dead and an unfilled breach in neurology is left us. No name since Marshall Hall, Claude Bernard, our own Brown-Sequard and Seguin, Beard and Hammond will be more missed in the annals of physiological pathology and clinical neurology.

Hughlings Jackson elucidated epilepsy to such a degree and in its focal epileptoid monospasm forms that they bear his honored name, Jacksonian Epilepsy.

His age was seventy-six years at the time of his death. He designated epilepsy as a discharging lesion and preceded Hitzig, Ferrier and Roberts Bartholous on the recognition of focal planes of differentiation between exclusively intellectual and psycho-motor areas of cerebro-mental force in the brain which the latter experimentally demonstrated and demarked. Hughlings Jackson was not given to a biological experimentation. He was purely a clinician, yet as such he has been called the greatest force and discoverer in neurological medicine of his day. A contemporary of Darwin, Tyndall, Huxley and Dalton and Herbert Spencer and others of his day, he imbibed the spirit of their methods of observation and reasoning and applied them in his hospital and personal clinical researches and conclusions and was an instructor of his profession, the equal if not the superior of the great Charcot.

He contributed much of our knowledge to subjects too many here to record. His many meritorious monographs would make a library of no insignificant proportions. To him apraxia was more than the Seelenblindheit of the Germans and even beyond Claude Bernard and the entire French school of biological research workers have added to our light on the functions of the cerebellum.

His worthy, wonderful work has added everlasting fame to the *London Hospital Gazette* in the merit of its pages, imperishable memory among appreciative medical men to the London Hospital and the National Hospital for the paralyzed and epileptic, in which he wrought so long and so faithfully for science and humanity, and to his own good and great name an immortal memory treasured with never dying gratitude.

A bright star has fallen from the English firmament of brilliant neurological stars which the Maudsleys, Broadbents, Albutts, Gowers, Bastians and other lights there will not replace, nor the Babinskis, Obersteiners, Homens, Kovalewskis, Sepillis or Golgis of other skies will not compensate us.

The light has gone like that of Mendel, the brilliant and great of Berlin, because of this loss to science and humanity and to us, the special recipients of their scientific benefactions.

Hughlings swept away the mists from the Galliam and Spurzeheinian conception of neuro-cerebral physiology and gave us a better conception of the brain and mind than Wigan or Brown-Sequard even, on dual personality and made problems like the double life of Dr. Jekyll and Mr. Hyde clearer to our comprehension than ever before.

REVIEWS, BOOK NOTICES, REPRINTS, ETC.

"THE WORLD OF DREAMS," by Havelock Ellis. (Boston, Houghton-Mifflin Company, 1911.)

A newspaper criticism of Havelock Ellis' *World of Dreams*.

The St. Louis *Globe-Democrat*, 19th last, has the following:

As an earnest of the thoroughness with which he has pursued this fascinating subject, Mr. Ellis tells of several ways in which books of dreams have been written. There is, for example, the literary method—the collection of stories at the hands of dreamers of dreams. It is futile; not one dreamer in ten millions can describe a dream. There's the clinical method, by personal collection of facts with analysis of results. Dr. Stanley Hall of Clark University has done remarkable work under this head. There comes now the experimental method, causing subjects to dream, interfering with these subconscious hallucinations and recording the results of the interferences. Then there is finally the introspective method, the most scientific manner of studying dreams.

Dr. Ellis freely confesses that dreams are so intangibly made of things intangible that to fabricate a theory of their lines of material and construction seems almost beyond mortal ken and ability. Yet there is the man awake, in full possession of his faculties; anon he is asleep, oblivious as in death to everything about him. The visions pass before his curtailed mind; now he awakes so possessed of the things that came before his drooping eyes that moments, minutes, hours, days, sometimes a whole lifetime, must elapse before the dreamer can shake off those sleep-built phantasies.

The present author is imbued with a fine optimism in the pursuit of his present subject. He believes in dreams and in the possibility of their reasonable interpretation. In con-

clusion he gives the dreamer this plague for his dowry: "Rightly understood dreams will give dreamers the clew to the whole of life." Here Psychologist Ellis pontificates a bit. The scientist, and likewise the psychologist (if psychology be a science), is never so interesting as when he comes with carefully constructed ipse dixits and pontificates the while.

NEW WORDS AND RECENT KNOWLEDGE.—The necessity for two new volumes of the Century Dictionary owing to the recent remarkable advances in so many fields of endeavor has impelled this enterprising publishing house to promptly meet the urgent demand of the present mighty impulse of scientific investigation, mechanical invention, economical improvement, preventive and biologic medicine. Out of all this mighty advance in many departments of science, art and manufacture and processes of research, a new vocabulary has arisen. This has been added to the Century. Making an increase so extensive of words representing "facts and processes and persons that the compilation, carefully effected in the two new volumes, makes the latter indispensable to perfect the Century set, to restore at once its efficiency in the highest degree and to maintain its utility and value for many years to come." So that no one who would keep abreast of his occupation or the general advance in knowledge of matters of our day can dispense with this marvellous annex to the most marvellous of master works in lexicography.

THE EIGHTH ANNUAL REPORT OF THE OFFICERS OF THE HARTFORD RETREAT at Hartford, Conn., 1910.

This is one of the best of our many good hospitals and hospital homes for the mentally alienated. We familiarized ourselves with this institution during the lifetime of the great Isaac Ray when he was temporarily in charge and learned much of psychiatry from him.

We note here a regrettable fact that while these worthy institutions are not entirely neglected, many of them might be better endowed.

In this excellent report for which we have not more space we record this fact as applicable to many other similarly worthy

establishments and the true statements of Dr. Philip Combs Knapp therein recorded:

"Bequests and appropriations have been made for the care of the sick, yet they are so expended that the surgically sick receive the most approved care, with all the adornments of nickel and marble; the medically sick receive decidedly fewer advantages and the nervously sick are treated in the proverbial fashion of stepchildren."

Though this institution has been better cared for by the wealthy philanthropic, more aid to this and others like it could be applied for the welfare of inmates, especially for after care.

ON SOME OF THE CLINICAL METHODS OF INVESTIGATING CARDIO-VASCULAR CONDITIONS. The Jerome Cochran Lecture, Alabama State Medical Association, 1909. By Lewellys F. Barker, M. D., Professor of Medicine in the Johns Hopkins University; Physician-in-Chief to the Johns Hopkins Hospital.

This paper is from an eminent source of clinical research, well supported by cardiographic, electrographic, electrocardiographic, tonophonographic, phlebographic, arteriographic, Roentgenoscopic and diagrammatic representation.

The text is terse, forceful and instructive in keeping with the well known ability of the author.

A TEXT BOOK OF EXPERIMENTAL PSYCHOLOGY WITH LABORATORY EXERCISES. By Charles S. Meyers, M. A., M. D., Sc. D. of Gonville and Caius College, University Lecturer in Experimental Psychology, Cambridge. Second edition; Parts one and two. With figures and diagrams. Cambridge at the University Press, Longmans, Green & Co., New York. 1911. \$3.20 net.

Various changes have been made in the present (2nd) edition. The publication of the book has been transferred from Mr. Edward Arnold to the Cambridge University Press. The two parts—the text book and the laboratory exercises—are now bound in separate volumes, in order to facilitate reference from the one to the other. A chapter dealing with experiment on thought and volition has been added, and the order of the

two previous chapters has been transposed. The whole work has been subject to a revision; the modifications and additions in several chapters have been considerable.

This book is indispensable to the psychologist, the alienist and neurologist, the physiologist and is a guide to the physiologist, jurist and amateur student of the human mind and brain. The philanthropist and charitable student of psychiatry might well profit by perusal of its pages.

THE CENTURY DICTIONARY SUPPLEMENT, prepared under the superintendence of Benjamin F. Smith, A. M., L. H. D., managing editor of the Century Dictionary. Published by the Century Company, New York. Two volumes.

The Century Dictionary (1889-91) was much the largest collection of the words of the English language that has been published. In it the number of words and phrases at that time defined in general dictionaries of English was increased by upward of one hundred and twenty thousand. This additional collection included not a few words which had appeared in special glossaries and technical dictionaries, but much the greater part of it was obtained by systematic search through English literature, especially the literature of science and the arts. The labor and cost of effecting this very notable enlargement of the recorded English vocabulary have amply been justified by its utility to the many thousands of its users during the past twenty years.

The two volumes which supplement the original work are before us. They contain additional words, senses, defined "phrases" representing the increase in scientific and technological terminology, as well as in the "common" vocabulary, during the past twenty-five years and possessing a high degree of technical importance and general interest.

Readers of this magazine, including as they do, votaries of all the sciences and arts and members of the professions can not well do without this great supplement to the great dictionary of the century.

The Canadian Journal of Medicine and Surgery for last September is a specially illustrated number of extreme value and extensive information to any one interested in the

origin and progress of medical education in Canada and incidentally in the United States. This number is simply superb and we are gratified greatly at having had the pleasure of reading it. It contains near a dozen illustrations worthy of framing for any physician's reception room. The Medical Profession in Ontario—a legal and historical sketch by Honorable William Renwick Riddell, is one of intense interest and value.

WHITE'S OUTLINES OF PSYCHIATRY is a third time before us, elaborated, enlarged and up-to-date. This is one of the *Journal of Nervous and Mental Disease* publications.

Serieux and Capgras are discussed in this volume and the Ganser system of interrogations and responses. Pellagra and other new matters are touched. As insisted upon, heretofore, this book deserves a better binding. The typographical work is good. The author's qualifications, did we not know them personally, may be seen in the positions held by him.

By William A. White, M. D., Superintendent Government Hospital for the Insane, Washington, D. C.; First Lieutenant Medical Reserve Corps, United States Army; Professor of Nervous and Mental Diseases, Georgetown University, Washington, D. C., and Lecturer on Insanity U. S. Army and U. S. Navy Medical Schools, Third Edition, Revised and Enlarged. Price, \$2.50. New York.

The Journal of the Maine Medical Association, November 1st, 1911, has among other good matter, anent Dr. Wiley, the following timely and suggestive editorial by C. R. Burr, which we give slightly abridged:

The more the matter is examined, the more absurd the charge becomes.

Attorney General Wickersham, who objected to paying Dr. Rusby \$20.00 per day, found no difficulty in paying the legal experts employed by his Department in the Trust-busting cases, \$166.00 per day.

Other legal experts, while working for the Government, have received \$50,000.00 and even \$80,000.00 per year and \$50.00 per day while giving evidence in court.

If it was possible to pay such compensation to a legal expert, why was it impossible to pay \$20.00 per day to a scientific expert?

The fact is that for many years an exaggerated emphasis has been placed in this country upon the services which the legal profession render to the community.

Congress is largely in the hands of lawyers, and in consequence, legal matters receive a more sympathetic handling than those which pertain to science. But even so, Congress cannot afford to ignore what it eats, any more than the country at large can.

Hence it is gratifying to learn that the President, himself a lawyer, has a larger vision than apparently his Attorney General has, for in his decision with regard to this matter, he says: "Here is the pure food act, which it is of the highest importance to enforce, and in respect to which the interests opposed to its enforcement are likely to have all the money at their command needed to secure the most effective expert evidence. The Government ought not to be at a disadvantage in this regard, and one cannot withhold one's sympathy with an earnest effort by Dr. Wiley to pay proper compensation and secure expert assistance in the enforcement of so important a statute, certainly in the beginning, when the questions arising under it are of capital importance to the public."

THE ACTION OF SODIUM BENZOATE ON THE HUMAN ORGANISM.

By C. A. Herter, U. S. Referee, Professor of Pharmacology, Columbia University. The following note accompanies this pamphlet:

This paper was offered to the *Journal of the American Medical Association* for publication, but was refused by the Editor, partly on account of its length, partly because the *Journal* did not care to open its pages to "anything more of a controversial nature regarding the benzoate question," partly because the criticisms of Bulletin No. 84, contained in this paper, were regarded as impolitic as coming from the *Journal*.

Deeming it important to a correct understanding of the benzoate question that physicians should be acquainted with the facts given in my paper I have decided to privately print

it and distribute it among members of the medical profession.

CHRISTIAN A. HERTER.

A PRELIMINARY COMMUNICATION CONCERNING A NEW DIAGNOSTIC NERVOUS SIGN. By Charles Gilbert Chaddock, M. D., of St. Louis. From *The Interstate Medical Journal*.

A good communication from a good source which has already been editorially noticed.

PRINTED MATTER ON EUGENIC SUBJECTS such as Special Institutions for Children of Dangerous Moral Tendencies. By De Croley of Antwerp, Feeble-Minded Children with Dangerous Tendencies, by Hy. H. Goddard of Vineland, N. J., comes to us from the U. S. A. Dept. of State through C. R. Henderson of Chicago. For these we return thanks.

These, the indeterminate sentence, and many other kindred subjects are to be had for the asking from the Department of State, U. S. A., or C. R. Henderson, Chicago University.

The entire police force of the U. S. and prison authorities should have these matters kept before them.

MACULOCEREBRAL DEGENERATION (FAMILIAL). By Edward L. OATMAN, M. D., Surgeon to the Manhattan Eye, Ear and Throat Hospital, New York City.

An interesting account of interesting cases and conditions worthy of consideration by neurologists as well as by ophthalmologists. From *American Journal of the Medical Sciences*.

THE DIAGNOSIS OF TUMOR OR ABSCESS FORMATION IN THE TEMPOROSPHEOIDAL LOBES. With a Report of a Case, with Operation. F. Foster Kennedy, M. D., B. Ch. (Queen's), Chief of the Neurological Clinic, Instructor in Neurology, Cornell University Medical College, etc., New York. From *The Journal of the American Medical Association*.

The symptom complex and cases in this meritorious and painstaking brochure are worthy of careful neurosurgical and medical diagnostic consideration.

SOME INVESTIGATIONS CONCERNING THE RELATION BETWEEN CARPAL OSSIFICATION AND PHYSICAL AND MENTAL DEVELOPMENT. Eli Long, M. D., Instructor in Pediatrics, University and Bellevue Hospital Medical College; Assistant Attending Physician, Willard Parker Hospital. E. W. Caldwell, M. D., Visiting Physician to the Roentgen-Ray Department, Presbyterian Hospital, New York: Formerly Director of the Edward N. Gibbs X-Ray Laboratory, University and Bellevue Hospital Medical College.

PHYSICIANS AND HISTORY. By Carroll Kendrick, M. D., of Kendrick, Miss.

The most interesting feature of the paper besides its eulogy of Dr. Marion-Sims is the showing that Crawford W. Long, of Georgia, discovered anesthesia and the record that only a few months ago a medical journal with a very large circulation advocated the claims of Dr. Morton, and intimated that the argument in favor of others was closed. So far as the author knows he was the only man who replied. The proof that Long discovered or first used surgical anesthesia is as plain as that which proves that Washington was once President of the United States.

THE CARE OF CASES OF ACUTE INSANITY. SHOULD DELIRIUM TREMENS BE CLASSED WITH THE INSANE? L. Vernon Briggs, M. D., Boston, Mass., from *New England Medical Monthly*.

Diagnostically differentiated and well presented by one who knows.

TREATMENT OF WOUNDS OF THE HEART. With Report of Two Cases. By Walter C. G. Kirchner, M. D., of St. Louis, Mo., Superintendent and Surgeon-in-Charge, City Hospital. From *Annals of Surgery* for July, 1910.

A valuable and especially instructive contribution to the literature.

THE AMERICAN PROCTOLOGIC SOCIETY through its committee send the able address of the President of that Society, delivered at the annual meeting held in St. Louis the

past summer, in which attention is called with figures to substantiate the same, to the lack of attention paid to teaching the subject of Proctology by the various institutions throughout the United States, a subject which in the past the committee assert has been sadly neglected by the regular profession.

Committee consists of Joseph M. Mathews, M. D., Dwight H. Murray, M. D., Lewis H. Adler, Jr., M. D.

We take pleasure in mentioning and endorsing the position and plea of this committee of worthy gentlemen. We view the subject in the same aspect and though the magazine is concerned chiefly with the other end of the neuraxis area, it is but proper that we should altogether strive to make both ends meet in medicine for the welfare of the patient.

THE LIBRARY OF McLEAN HOSPITAL, WAVERLEY, MASSACHUSETTS, for 1911. By Edith Kathleen Jones, Librarian, is an interesting exhibit of progress in this essential branch of hospital equipment with lithograph and flashlight exhibits of library building and apartments.

This report of the seventy-fifth year of the McLean Hospital Library thus concludes: It began with 160 volumes,—it now has 11,700. The medical department of 5000 volumes, gathered entirely within the last twenty-five years, comprises a very complete collection of books and periodicals on chemistry, especially physiological chemistry; all the most important books and periodicals, English and foreign, in psychiatry; a very good department in psychology, and no mean collection in general medicine. Much care and thought as well as money have gone into its building. The general library numbers 6700 well selected and carefully classified and catalogued volumes in charming quarters. We look back on a good record in the past, and forward with confidence to a steady growth in numbers and usefulness in the future.

Simplified Technique for the Administration of Salvarsan Intravenously. By Charles H. Chetwood, M. D., Professor of Genito-urinary Surgery, New York Polyclinic Medical School and Hospital.

Some Observations on the Use of Guipsine as an Appressor Remedy in Cases of High Arterial Blood-Pressure. By O. K. Williamson, M. D., F. R. C. P., Physician to the City of London Hospital for Diseases of the Chest, Victoria Park, etc. From *The Practitioner*.

Extraction of Foreign Bodies from the Eye with the "Corneal Curette." By John M. Wheeler, M. D., Assistant Surgeon, New York Eye and Ear Infirmary; Ophthalmic Surgeon, New York Throat, Nose and Lung Hospital. New York. Reprinted from the *American Journal of Surgery*, June, 1911.

On Certain Electrical Processes in the Human Body and their Relation to Emotional Reactions. By Fred. Lyman Wells and Alex. Forbes, Archives of Psychology, edited by R. S. Woodworth, March, 1911, from the Psychological Laboratory of the McLean Hospital, Waverley, Mass.

State Course of Study for Approved High Schools in the State of Missouri, 1911. Revised by Wm. P. Evans, State Supt. Public Schools with Appended List of Library Books.

On the Determination of Alkylamines Obtained from Urine After Kjeldahl Digestion. By C. C. Erdmann, *Journal of Biological Chemistry*.

Arterial Ligation for Irremovable Cancer of Pelvic Organs; Technic Adapted and Amplified. By William Seaman Bainbridge, A. M., Sc. D., M. D., New York City.

The Katatonic Symptom-Complex: Report of a Case Occurring in a Middle-Aged Male. By Albert C. Buckley, A. M., M. D., Asst. Physician Friends Asylum for the Insane, Frankford, Philadelphia. From *American Journal of Insanity*.

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St. Louis Public Library Annual Report, 1910-1911, St. Louis, 1911. A good showing and splendid of progress.

Washington University Record, Chronicle Number, May, 1911.

Progress of Sugar from the Mouth to Muscle. Published by Mead, Johnson & Co. Jersey City, N. J.

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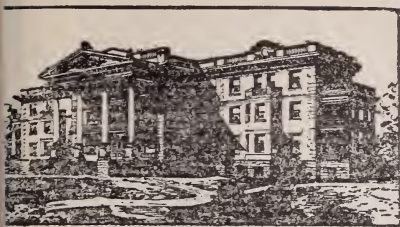
A MODERN INSTANCE OF SCIENTIFIC LIFE-SAVING.—When U. S. Senator Luke Lea, of Tennessee, gave a quart of his blood to save the life of his invalid wife, he not only gave a striking illustration of the advance of medical science, but a most gratifying exhibition of human sympathy and devotion.

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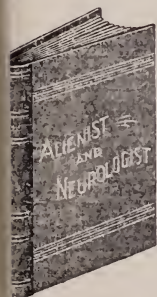
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arrest the operation while there was the slightest doubt as to the outcome, but the surgeons, realizing the weakening effects of such a strain, stopped the flow. After the operation Senator Lea fell to the floor in a faint.

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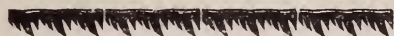
vantages of this exceedingly useful remedy is that it can always be relied upon to do all that cod liver oil can, with none of its objectionable or disagreeable features.

IMPORTANT NEW PREPARATIONS.—General practitioners will be interested in the announcement by Parke, Davis & Co., of two new products of their chemical laboratories. Proposote and Stearosan are the names chosen to designate the preparations in question.

Proposote is creosote in combination with phenyl-propionic acid. It is a straw-colored, oily liquid, neutral in reaction, nearly odorless and having a slightly bitter taste suggestive of creosote. It is insoluble in water, but is slowly decomposed by alkaline liquids. The indications for it are the same as those for creosote. Tubercular cough following pneumonia, the cough of pulmonary tuberculosis, acute and chronic bronchitis, purulent bronchitis, abscess of the lung, asthma, and bronchitis complicated with Bright's disease are among the pathological conditions benefited by its administration. Being insoluble in acid media, it passes through the stomach unaltered by the gastric juice to be slowly broken up by the alkaline fluids of the small intestine, hence may be given in gradually increasing doses until the desired effect is obtained. During prolonged administration, as is well known, creosote disturbs digestion, impairs the appetite and often causes nausea and vomiting. Proposote is free from this objection.

Stearosan is santalol combined with stearic acid. It is an odorless, tasteless, light-yellow oily liquid that is insoluble in water and dilute acids but is slowly broken up by alkaline fluids. The pathological conditions in which it may be employed with advantage are precisely those in which santal oil has long been used—chronic gonorrhea, cystitis, urethritis, vaginitis, pulmonary disorders such as chronic bronchitis, bronchorrhea, etc. It possesses therapeutic properties fully equal to those of santal oil, over which it has the important advantage of being practically without irritating effect upon the stomach. The explanation of the latter fact is that the preparation is not attacked by the acid gastric juice, but passes into the small intestine, where it is broken up or emulsified by

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THE SWEET PEA.—*The Philadelphia Public Ledger* speaks approvingly of the exhibition of the National Pea Society. Medical men look at members of this proclivity differently and would rather suppress them.

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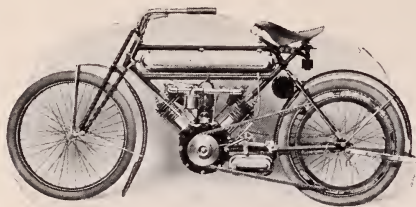
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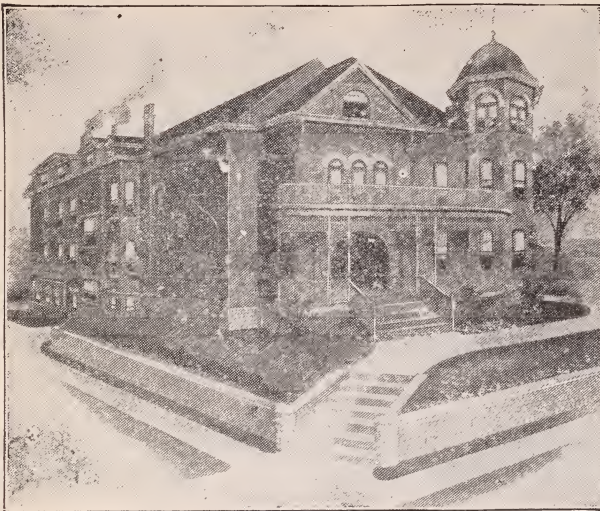
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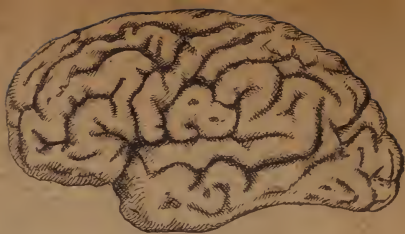
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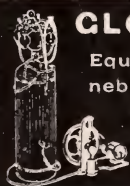
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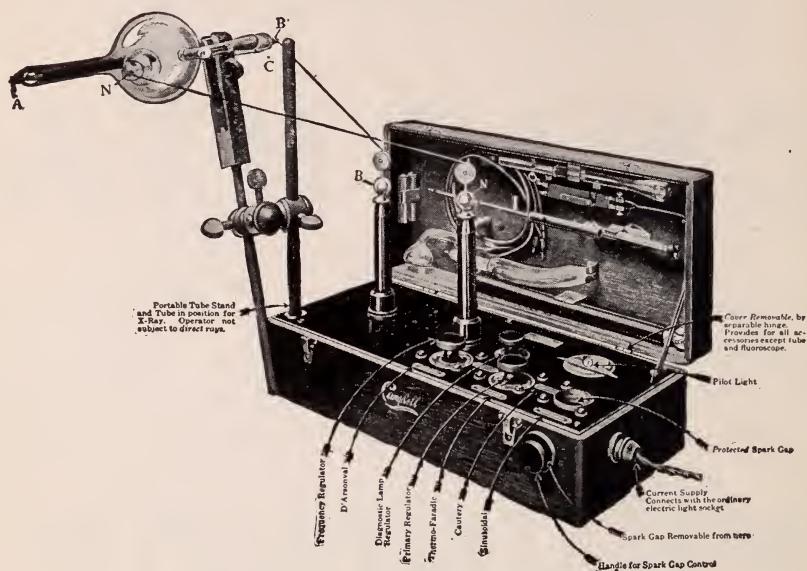
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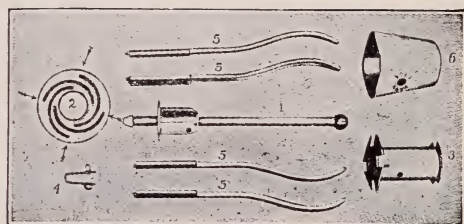
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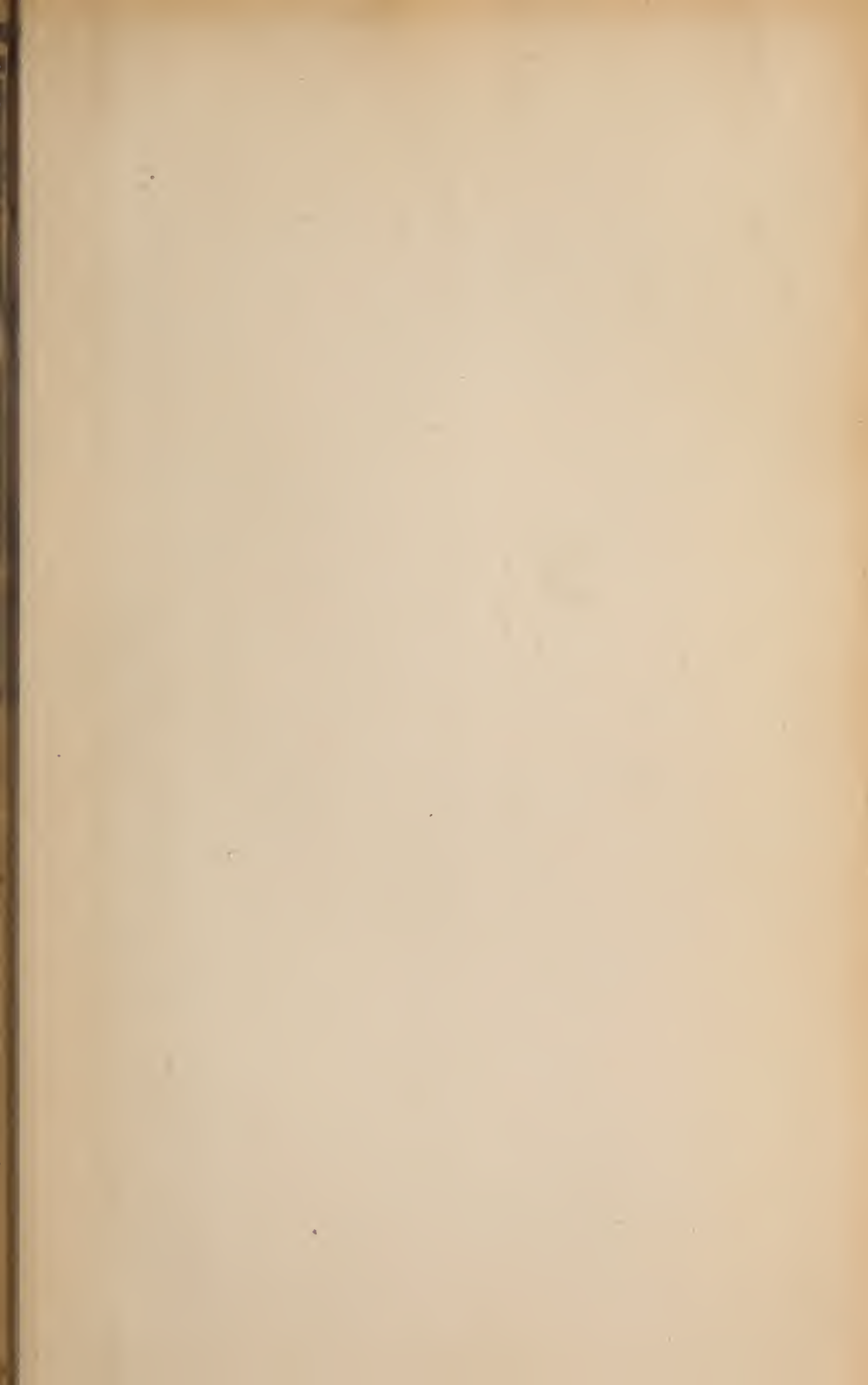


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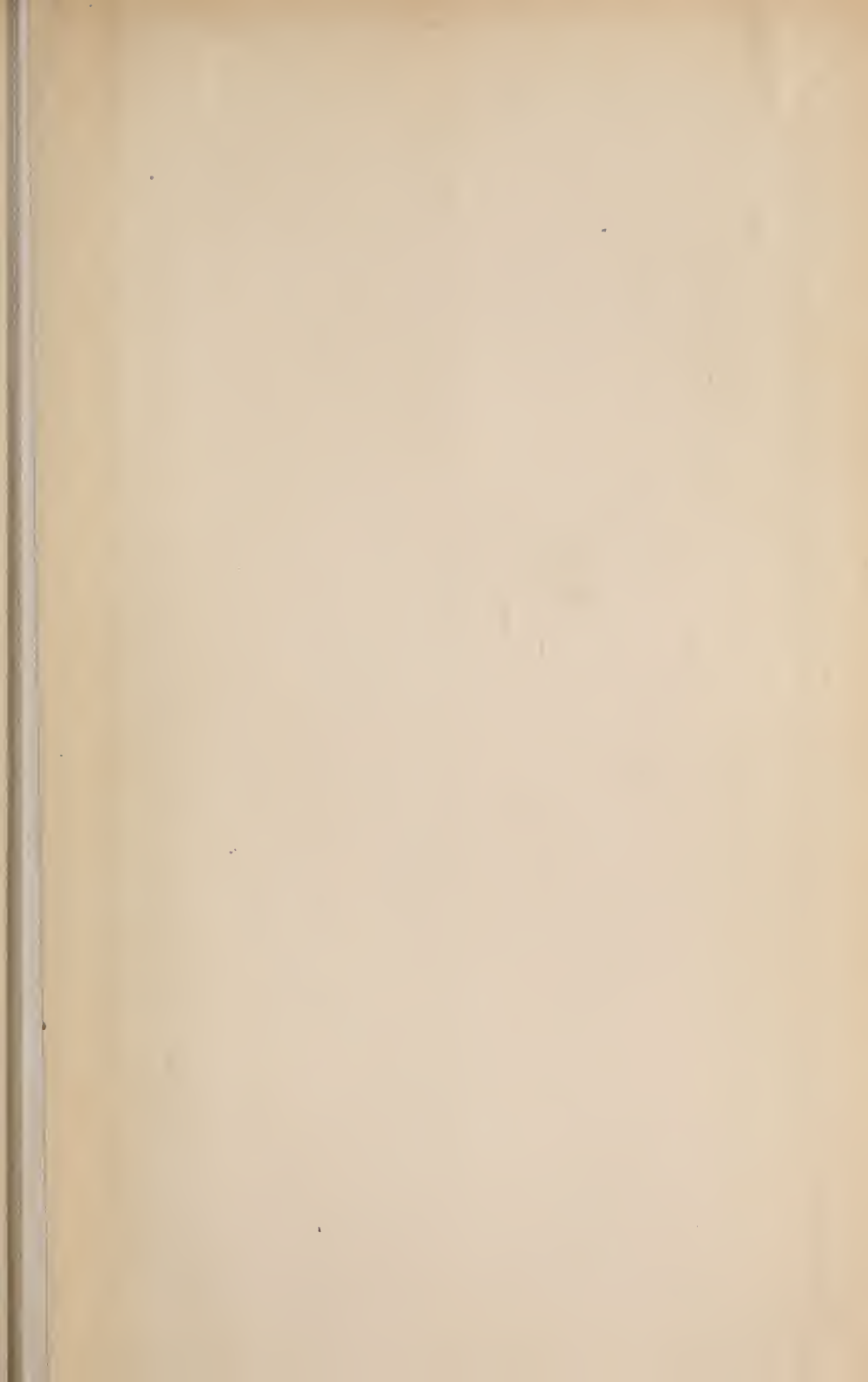
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